

**A Gloucestershire wild garden with some extraneous matter / by the
Curator [Henry Cook].**

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A GLOUCESTERSHIRE WILD GARDEN



BY "CURATOR"

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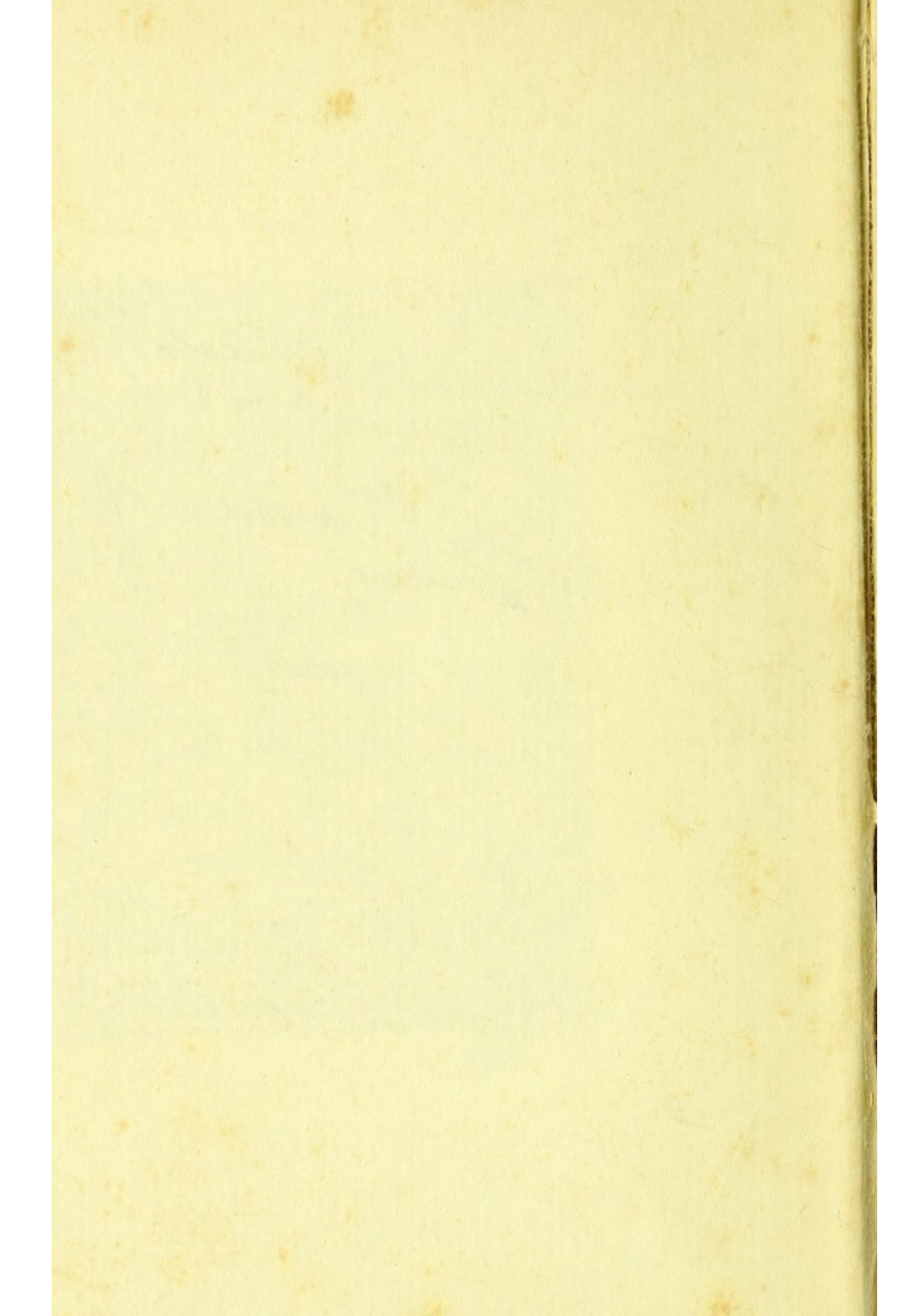
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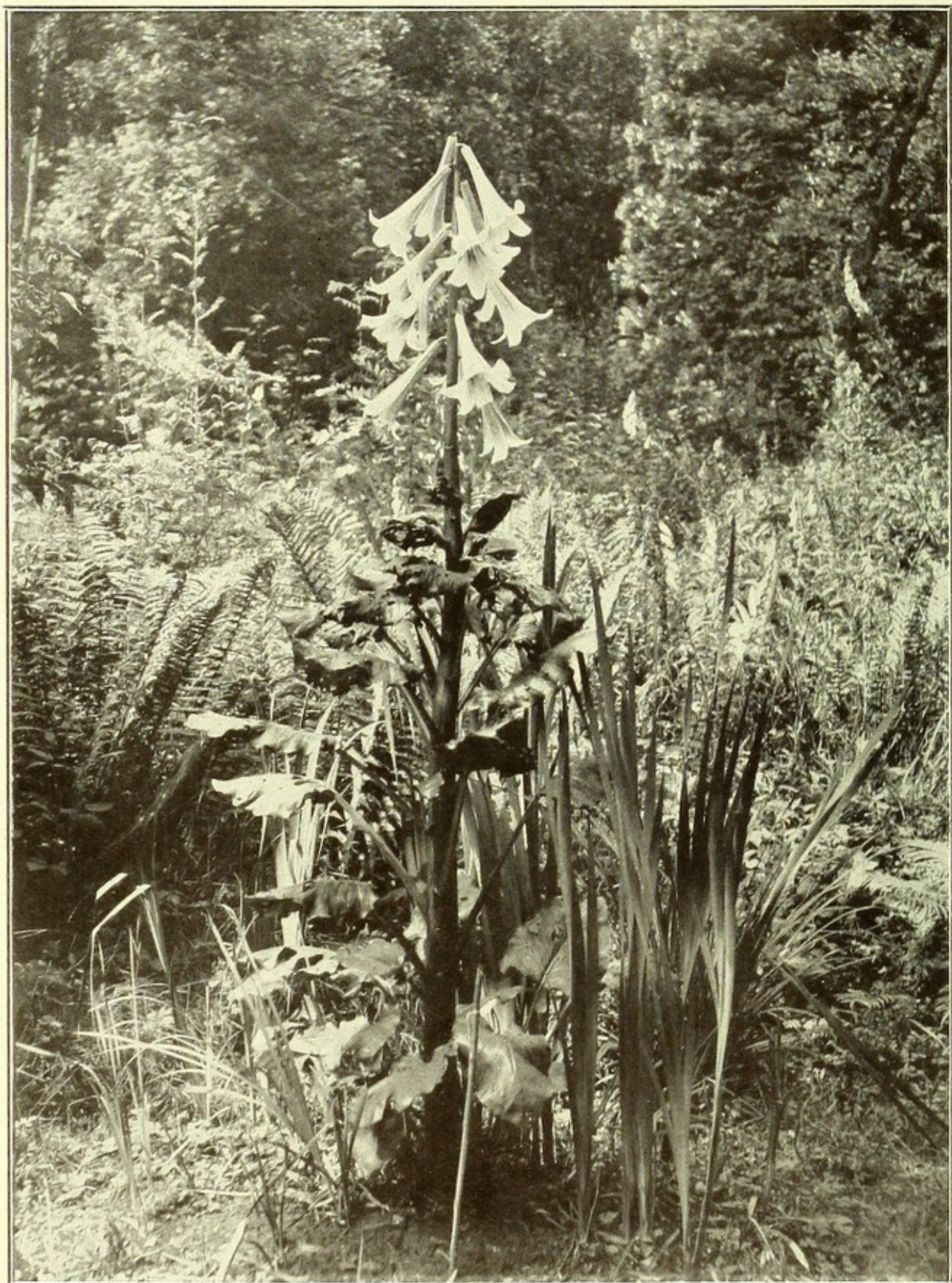


A GLOUCESTERSHIRE WILD GARDEN



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A GLOUCESTERSHIRE WILD GARDEN

WITH SOME EXTRANEEOUS MATTER

BY

THE CURATOR

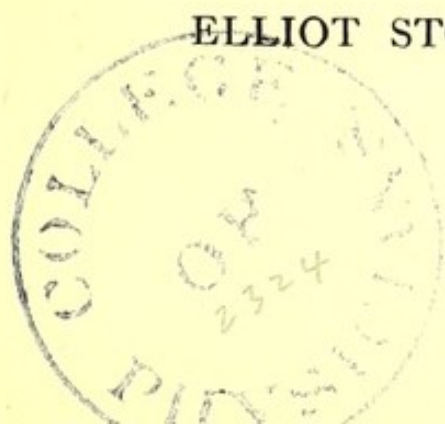
(Henry Cooke, M.D., F.R.C.P.)

WITH PHOTOGRAPHIC ILLUSTRATION

LONDON

ELLIOT STOCK, 62, PATERNOSTER ROW, E.C.

1903



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PREFACE

MANY years ago in India (ah, how many!) I used to picture to myself the home in England I hoped to form at some distant date, and visions of a house ensconced in woody depths, with gardens here and there in unexpected places, with lawns for tennis and croquet, with meadows for cream-yielding cattle, with water for ornament and use, and with a view over England's charming scenery, which under the circumstances of my visions loomed even more beautiful than the reality, if that be possible.

And years after, though still far distant from the present, I met with a charming book on the wild garden, and determined, come what would, if any garden should be possible at all it should be a wild garden.

In process of time came the day when my period

of sojourn in the East was drawing to a close, and long leave to England gave the opportunity of searching for a house, something, at any rate, like the cherished visions of long ago, and which would render possible the possession of a wild garden and my dream a reality.

It would be dreary to recount how many places I visited in response to advertisements, which now and then seemed to promise just the place I hoped for, only to dash my hopes afresh, my pilgrimages and journeyings to and fro over several counties ; and I had almost determined that I must put up with something that fell far short of my ideal, when fate led me to this place, and amongst the *sine quâ non* requirements I asked for, I found the possible site for a wild garden, and even something more of what I desired : woods and meadows, and a view not often excelled even in picturesque England.

And in the following pages I have tried to describe the making of the wild garden, with an earnest wish to be of use to those who have formed an ideal something like my own and wish to work it into a reality.

For this reason I have tried to point out the essentials required as to site and materials, and given descriptions of such plants as my experience has shown me to be the most desirable, and, as briefly as possible, the treatment that they require.

There are multitudes of plants that I have not mentioned, but it seemed to me more useful to point out those best suited to the object in view than to attempt to rival the many good books on the garden already existing. And here I would mention one that has been of the greatest service to me, as an amateur gardener, and one amongst the very best that I know—I mean Robinson's 'English Flower Garden.'

That I have interlarded my various chapters on gardening with lighter and evanescent matter, or with drier semi-scientific discourse, may to some be objectionable; to others with minds like my own, which like some humour interleaved with the more important matters of life, less so—nay, I even hope may be not altogether unacceptable. And I trust that these may even prove to be the majority of my readers. But at least I have read some most delightful examples of books on gardening, inter-

leaved with other things, and the things themselves were so charming that I, at any rate, have liked the somewhat irrelevant things the most, and should have liked to ask for more.

As for the critics, one does not write for critics; and I can only hope that, should any such one read this book, he may be a good one in the best sense of the word.

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I

THE SUBTROPICAL GARDEN

OUR part of Gloucestershire is cut off from the main portion of the county by the Severn river, which, when it has passed the city of Gloucester, takes a south-west course to the Bristol Channel, and widens to become the Severn Sea just as it leaves the south-west angle of the county.

The river's course for some fifteen or twenty miles below the capital city winds most picturesquely, and then widens and straightens until it looks, when viewed from the hills near here, more like a lake than a river, which effect is heightened as the eye looks south by the jutting out of charmingly wooded points on this side, while the furthest visible reaches of the water expand as they near the vanishing point of the view.

The Severn valley stretches widely to the east of the river, and is closed in by the distant Cotswold range of hills; but on our side the hills rise

within a mile or so of the river bank, and are covered with woods, and behind us, further west, stretches the vast Forest of Dean.

Behind the most jutting point of view to the south the Wye River joins the larger stream, and forms for some distance up its course the boundary of the county on the west.

Our hill-range is about 600 or 700 feet in height, and on its southern side it sends off two spurs, running, covered with woods, down to the valley below, where they gradually sink into the richly cultivated lower ground. They thus form a horseshoe-shaped valley, and in the deep recess of the horseshoe, though still 500 feet above the river, stand the house and grounds, sheltered behind on the north by the hanging wood which clothes the hundred feet of the hill above us, and on both sides by the wooded extending limbs of the horseshoe.

The site is thus exposed only to the south and south-west, with a wide expanse of southern sky, and enjoys all the sunshine that may be available, and commanding a view over the nearer farms and woods of the middle distance to the broad river which forms the chief point of interest 500 feet below, and far beyond it to the blue range of the distant Cotswolds; while on fair days, when the requisite degree of moisture in the atmosphere is present to afford unusual clearness, the eye

roams southward and eastward to the point where the Avon enters the Severn, and can discern His Majesty's training ship which is anchored there, some twenty miles down the river.

Indeed, our view is one of our greatest sources of pleasure, in which we take a sort of proprietary interest, ever yielding a sense of calm and quiet by its great expanse, and ever affording fresh charms of art-satisfaction by the varying combinations and fluctuating measures of the loveliest colours which Nature's pallet yields; and the interest, like most human interests, expands and fructifies when we have appreciative visitors to whom we may exhibit our natural picture.

Thus, with some important advantages of site and situation, of shelter and protection, the exotic wild garden became an easier matter to create and maintain in such relative success as the vicissitudes of our English climate may permit.

To reach the garden from the terrace, on which the house stands, we pass down by a little path leading through the home wood, and emerge on a broader one that winds its way amidst sunshine and leafy shade, under tall trees and bordered with banks of bracken, and here and there affording lovely views of the valley below and the glistening reaches of the river, until we gain the wicket-gate entering the wild garden.

The garden itself just now, ere despoiled of its

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summer treasures, is a jungle of forest trees and flowering shrubs, and is shut in on all sides by an embracing wood, which, indeed, would shade it too completely were it not that the ground slopes somewhat steeply from its northern point to its southern extremity, and faces the south-south-west.

It comprises about two acres within the wire fencing, though some of this is hardly available for flowers, being occupied by forest trees. There are three pieces of water on three different levels. The upper pond, about 100 yards in length, curves round like the letter U, and encloses an island planted with tall Conifers and edged with Rhododendrons. The middle pond receives the overflow water from the larger one, and is filled with Water-lilies. A little stream from this runs most of the year, and replenishes the lowest pond, which, commencing as you enter the wicket-gate, runs to the farthest southern boundary, about 50 yards, and is overhung at its upper end by clumps of various species of Bamboo, and throughout its further length by the branches of four different kinds of leafy Polygonum, whose largest shoots are some 14 feet in height.

There are many stately trees within this boundary—the *Deodara*, from the Indian Alps; the *Aurocaria*, from the mountains of Chili; the *Wellingtonia*, from California; the *Eucalyptus*, from Australia; conifers, from the north of Europe;

and our more homely forest friends, the Oak, the silver Birch, the Chestnut, the Holly, and the Ash.

Many of these trees were planted some sixty years ago by the kindly owner of those days, who first designed the garden and made the ponds, but who, unfortunately, was succeeded by others who cared for none of these things, and allowed the fences to fall down and the garden to be overgrown with Gorse, Bracken, and Brambles, until all semblance of a garden was lost for the time; still, the possibilities remained, and it wanted only a rabbit-proof fence to be restored, the rubbish rooted up, the ponds cleaned, and the planting to be renewed.

There were only two or three kinds of flowering plants to be found when I entered on possession, which apparently the rabbits and straying cattle had no liking for, and which Time had not eradicated; these were clumps of hardy Fuchsia and the coarser forms of Funkia, and the white Water-lily.

I have added to the Conifers *Thujas*, *Piceas*, *Retinosporas*, and several species of *Pinus*. Amongst the latter the stately Douglas pine has grown the most satisfactorily. There are some planted only fifteen years ago, which have attained a height of 40 feet, exceeding any other species of Conifer which I have planted either here or elsewhere in the grounds.

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This, then, is the framework of the garden, and its special advantages are shelter, sunshine, and an abundant supply of water. With these much may be done, and without them little or nothing, so far as exotic plants are concerned.

I wonder whether the distant predecessor of whom I have spoken pictured in his mind a garden like the one which now exists here, and whether the conditions of his present existence permit him to know what has been done, and whether this meets with his approval as carrying out the plan he once commenced. Who knows? It sometimes troubles me when tending carefully the 'garden that I love,' and which I think loves me (for there is certainly sympathy between us), to think that perhaps the same loving care will not be lavished on it when I have ceased to possess it; and a doubt intrudes itself whether or no I may in the future state that is so soon approaching yet retain an interest in its welfare. Mundane things are so provokingly evanescent. But if our sympathies are still retained with the loved *ones* we leave behind, why not with the loved *things*?

II

THE UPPER GARDEN

A FEW years ago this ground above the higher pond was covered by a jungle of trees, brambles, and tall weeds, and was a perpetual bog, giving a harbour to my enemy the rabbit when he succeeded in getting in, so that I determined to clear it, leaving only a few trees for shade and artistic effect ; and I therefore threw back the fence shutting in the garden on this the north side some 40 yards, and the open space thus gained has many natural advantages. It is damp, as I have said ; there is a spring on the upper side, and a tiny rivulet leads down to the pond below, and forms one of its several feeders, although in a season of drought like this it ceases to run towards the end of the summer. It is fringed with Ferns, and I have broken the straightness of its course with moss-covered stones.

Masses of rock covered with mosses, trailing Woodbines and Honeysuckle, stud the centre of the plot, which has developed since the wood was

cleared away a crop of Foxgloves in the hollows and Bluebells everywhere.

Amongst the rocks I have planted the charming English Iris (so called, though it really comes from the Pyrenees), and in other moist spots the more lovely forms of Iris from Japan, and in the boggy places the Californian Lilies (*L. pardalinum* and *superbum*). Four years ago I also planted the grand *Lilium giganteum*, and waited patiently for it to flower. Every year it raised a stalk, with its thick cabbage-like leaves, and then faded away; but this year it rewarded my patience by sending up a stalk $6\frac{1}{2}$ feet high and $4\frac{1}{2}$ inches in circumference at the base, and in due time was crowned by a spike of twelve of the most beautiful flowers that I have ever had the pleasure to look at—long dependent bells, symmetrically arranged, over 2 feet of stem, each 8 or 9 inches long, of purest waxy white, tinted inside with lines of rosy purple.

This surely is the Queen-Empress of the lily family—tall, well proportioned, imperial in aspect, and crowned with the loveliest floral productions. All the flowers open at the same time, and make a crown of beauty, and not the less so because the colouring is not gorgeous, but severely pure. It comes from the deeper gorges of the Himalayas.

Groups of Funkias of various kinds border the little path and stud the interstices between the



LILIUM GIGANTEUM (THE HIMALAYAN LILY).

red and white Spireas, which are set in a mass of St. John's Wort, covering the slope to the pond.

The path to this northern end of the garden passes under spreading boughs of the great pine (*Pinus excelsa*), and then between banks of Fern and under the mass of high Hollies that make so good a screen against the north wind, and emerges from behind an old stone ruin, covered with Lichens, Ferns, Ivy, Clematis, and trailing Honeysuckle; and under the arching branches of a clump of *Leycesteria formosa*, which we call the tassel-plant, from its long tassels of depending flower-stalks, crowded with red bracts covering purple berries, and ending in two or more white, star-shaped flowers: another of the acquisitions from the far-off Himalayas.

The bank leading up to the belt of wood sheltering the spot on the north is covered with the stately *Spirea Lindleyana*, *S. ariefolia*, and *S. Bumalda*, interspersed with clumps of *Polygonum* of various species.

The space below is covered with many kinds of herbaceous Spirea, amongst which the beautiful rose-coloured *S. palmata*, with its broad leaves and masses of flower-heads, is one of my favourites, and near it, for contrast, is the white-flowered variety of the same. All these love moisture, and most of them have their roots in soft ground, rendered

damp by the rivulet, and in June or July there is a blaze of colour in this part of the garden.

The swampy ground under the western bank, shut in by the wood which forms the boundary here, is planted with different species of Daffodils, the earliest harbingers of the flower wealth of the coming summertide.

This year I cleared the last patch of unreclaimed ground within the enlarged boundary, and have planted it with Bamboos. As yet they look new and artificial, but in the coming year I hope they will have filled out and grown tall, and their arching branches will have formed arcades of delightful shade. I have several new specimens here which are not found in the rest of the garden, and which differ from those earlier planted in the colour of their stems—clumps of the *B. nigra*, with black, and of *Alphonse Karri*, with naked, smooth, enamelled stems, marked with longitudinal double stripes of green; and *B. Castilionis*, with single stripes of the same colour, while its leaves are striped with yellow, and are of a delicate bluish tinge on the under-surface. These are from China, Japan, and Manchuria.

Groups of *Leycesteria*, *Eulalia*, and the great *Spirea gigantea*—all tall-growing plants—fill in the vacant spaces, and many minor plants which love moisture, as the *Agapanthus*, *Crinum capense*, the *Montbretia*, and the *Calla* from Africa.



THE UPPER POND IN THE WILD GARDEN.

This new plot has already absorbed some 400 plants, and still there is room. Amongst shrubs there are the Golden Elder, the silver-leaved Poplar, the dark-green *Retinospora*, and the purple-leaved Filbert, but these will take some years to grow into prominence.

The Funkias are charming plants for damp places, with their wealth of different coloured leaves—the great heart-shaped *F. Sieboldi*, with its glaucous hue, the silver-edged, the yellow-splashed, the dark-green, and many others—all yielding lily-like flowers in due season.

The shallower portions of the pond are covered with white and yellow Water-lilies (*Nymphaea alba* and *Nuphar lutea*), and some of the shallower spots of the deep water have colonies of Water-lilies which have formed of themselves.

In a corner shut off from the wild ducks, which are enemies of water plants, are specimens of the great double-flowered, and the sweet-scented, and the smaller rose-coloured Water-lilies, while in the pond in the southern end of the garden are the large rose-coloured, the primrose-coloured, and the great white.

The wild ducks, useful as they are in freeing the garden from slugs, snails, and frogs, which before their advent were pests of various degrees, are enemies of all water plants. They have destroyed the sweet-scented Cape Water-weed (*Aponogeton*),

and many other water plants, indigenous and exotic ; but as it is a question of choice of evils, I have chosen the loss of the water plants.

On the bank of the island close by I have planted three species of *Senecio* this season—*S. macrophyllus*, *S. doria*, and *S. japonica*, but only one species has flowered.

In the large-leaved *Senecio* few would recognise a Groundsel, yet it belongs to the same family, and is a true *Senecio*. Yet less likely would they be to recognise a new species of Groundsel which I have recently obtained from the Riviera, the *S. arborea*, which is planted amongst the exotics above the middle pond. Its leaves are from 12 to 18 inches long and 1 foot broad, and it is already growing into a tall plant, and seems likely to realize its specific character of *Arborea* within a reasonable time. But the Groundsels are ubiquitous and polymorphous.

The German ostrich fern (*Struthiopteris germanica*) occupies a little hollow between the rocks, moist and shady, and raises its tuft of dark-brown fertile fronds in the centre, formed by the spreading and radiating green sterile fronds, in marked contrast to the ferns native in our woods, though resembling the *Osmunda* in having fertile fronds separate from the others.

Close by it is a mass of the *Bambusa palmata*, the Bamboo which bears the largest leaves of any

kind yet discovered. Its leaves are 18 inches long by 4 inches wide, and, although its height is not great, it is very handsome and conspicuous amongst bamboos. Its near relative, the *B. tessalata*, with leaves as long, but narrower, is just above it; but it has not thriven so well, and I must move it to a sunnier spot.

Groups of Day lilies (*Hemerocallis*), which delight in moist ground, are quite at home in this part of the garden. They are so varied in the character of their leafage and in the colour and shape of their flowers, from the early pure yellow and the coarser copper-coloured, to the rich double-flowered ones of later summer, that they yield a source of pleasure through the greater part of the flowering season.

Early in the year the waste places are carpeted with the charming little *Dicentra eximia*, a species of the bleeding heart, which grows only a foot high, and nods its little heart-shaped flowers over its fern-like leaves.

It grows thickly amongst the bog lilies, protecting them from the cold winds of spring.

The gorgeous crimson Lobelia (*Lobelia cardinalis*) is another of the damp-loving plants, and in the earlier autumn months yields the brightest bit of colour in this part of the garden. I have planted many of the more beautiful flowered Clematis, in the hope that they would mingle their trailing branches

amongst the other trailing things which cover the big boulders of the centre; but the mice have destroyed all but one or two, to my deep disgust.

One of the drawbacks to the wild garden is the shelter it gives to many enemies. When a rabbit succeeds in getting in, he is almost impossible to kill, and most surely goes for the latest and the best and usually the most expensive addition to the plants; while moles and mice are an ever recurring bother. The only one on the premises who can successfully set mole-traps is my cow-man, whom long practice has made an expert; but even he is often baffled here.

It would seem that the serpent has from the first been an habitué of earthly paradises, and he is not wanting here; but when he obtrudes himself on my notice he is usually swimming leisurely across the pond, to gain the little-disturbed asylum of the island. I saw a young adder a day or two ago essay this feat, and he found no difficulty, though occasionally rested on the broad leaves of the water-lilies. He seemed to me to glide along the surface of the water without submerging his body at all. I accelerated his movements with a stone, but did not prevent his gaining the sanctum of the island.

A big rock rests in the shallow water near this end of the pond, and Nature has decorated it, in her usual artistic manner, with Lichens, Ferns, and

Mosses. A *Rhododendron* has implanted itself on the rock, and sends its roots down into the soft bottom below; so also have sundry clumps of Heather and grasses of sorts.

The Water-hen, who is usually so coy of building where any may pry, has for the past two years selected the rock to make her nest and rear her little brood of tiny black balls of fluff, which, on their emerging from the shell, she took across to the shelter of the island; but how they descended the five feet of rock to the water I did not find out. The nest was made of long grasses intertwined as broad as a dinner-plate, with a ridge running round it two inches high.

One of the wild ducks also chose a stone just projecting from the water, grass-grown and hidden under the drooping branches of a *Leycesteria*, and hatched her brood in peace. There is a conical island in the middle pond, on which grows a juniper, which is a favourite place for another of the wild ducks to breed, and she resorts thither with her little family to roost at night. It is comical to see the little unfledged ducklings attempting to scramble up the ascent; but she sits calmly on the top, aiding their attempts with voice only, apparently not doubting their success. The way that these tiny ducklings adapt themselves to their surroundings immediately on vacating their shells and launching into life astonishes me. By

virtue of heredity they are already fully educated, and within a few minutes of their birth they are darting over the surface of the water after the gnats and flies to be found there. But the death-rate of these charming little aquatics is heavy. They have many enemies, against which their maternal protector can make no sufficient resistance. Both hawks and crows think their tender, fluffy bodies good to eat, and I fear that an occasional water-rat is a more insidious enemy. But beyond these open antagonists they suffer from the envy, hatred, and malice of rival mothers of broods that have hatched about the same time, who, when an innocent and too confiding duckling wanders too near, seizes him by the neck and holds his head under water, despite the frantic appeals of the bereaved mother. And, indeed, the lordly mallard, in his insolent beauty of cream-coloured sides, green-barred wings, and purple-coloured head shot with blue, evinces a most unnatural parental cruelty in punching under water the gentle little chick that comes too near his majesty.

Amongst the unwelcome visitors to the pond, especially to this upper, more shallow end, during the spring months of the last year or two has been a Heron, who, despite his handsome appearance and lordly bearing, I object to, for his intentions are felonious and most objectionable; for if anyone has a right to catch trout in this preserve it is

not he. He has been warned off repeatedly, and at last, when diplomacy failed, resort had to be made to harsher methods, and dread war was declared, in which, as became justice, he suffered reverse.

The trout in this pond are the yellow-fleshed American variety, and I was assured, when first I put them in, that they would give no sport with the fly, but I disproved this assumption by catching half a dozen in an hour one summer evening. They used to rise to the natural fly all over the water, dimpling it with ripples, and now and then making such a splash that, when working near, they startled me; but the last year or two they have been less active. Perhaps they have had more bottom food, or perhaps the unusual heat made them less inclined for active exercise.

Last spring I had an opportunity of watching the process of spawning. A pair of big one-and-a-half pounders took up their station at the shallow extremity of the pond, where the water was only a foot deep. The female proceeded to scoop out a shallow, circular depression in the dead leaves and débris at the bottom by turning round and round on her own axis, whilst the male fish floated near. I saw him making rapid darts in sundry directions, and then discovered some eight or ten smaller trout hovering near, who when his back was turned had the audacity to rush in, only, however,

to be driven back by the rapid and forcible assaults of the big trout. This went on for a long while, and when I returned in the evening the same tactics were being carried on. The female fish still occupied the shallow depression, the attacking force still held a position around the spot, and their occasional assaults were being repulsed in the same gallant manner. How long this went on I could not determine, as the water became too dark for me to distinguish; but when I left I still saw the ripples and eddies caused by the big fish darting after his assailants.

III

A PASSING CONVERSATION

WE—that is, the Professor, the Padre, and myself (the Curator) — were strolling down the path that leads to the wild garden, when the Padre asked me the name of a particular Pine which I had planted there, and my memory played me one of those tricks which it has been in the habit now of doing—that is, of utterly refusing to give me the name of a thing which I ordinarily know as well as my own name.

‘Never mind,’ I said, ‘just now; the name will come back to me by-and-by, when we are talking of something else.’

‘Ah,’ said the Professor, ‘you have only mentally to give the order, and the memory, as we usually call it, will, without your further attention, search out the name in one of the pigeon-holes in which it lies stored up, and represent it to your mind.’

CURATOR. ‘Why do you say the “memory as we usually call it”?’

PROFESSOR. 'Because "the memory," as you call it, is but one of the several memories we all possess.'

CURATOR. 'Several? But how many memories have we?'

PROFESSOR. 'Five or six at least, each distinct and separable, each lodged in a particular little focus or centre of the brain, and each liable to be impaired or lost by material injury, caused either by direct lesion mechanically or by less direct, by interference with the blood-supply.'

PADRE. 'But this would make memory a mere material thing. Surely you cannot call thought a material action?'

PROFESSOR. 'Memory is as much a material thing as the secretion of the bile.'

Here we reached the gate of the garden, and as I foresaw that this discussion would set the Professor astride a peculiar hobby of his, I suggested that, as the day was warm, not to say oppressively hot, a cool seat under the deep shade of the spreading Pine might be a fitting place to continue the discussion. Seated there at our ease, I asked:

'What, then, is memory?'

PROFESSOR. 'Memory is recollection, a handing up of something that is laid by, a revivification of an impression once made on a set of cerebral cells, and a representation of that impression to a

superior centre, which we call a "centre of attention," whose duty it is to transmit it further to a higher centre still, which embodies it in words and presents it to the mind, or that centre which you call the mind.'

PADRE. 'Then you would make the brain nothing but a set of centres? What is a centre? And what, for that matter, is the brain?'

PROFESSOR. 'Just so. Unless you have some knowledge of what the brain is, you cannot well understand what a centre is. Let me say, then, as briefly as I may, that the brain is the chief centre of the whole nervous system, from which all the nerves of the body emanate, and which, through the agency of the spinal column, are distributed to every portion and organ of the body, including the organ which is called the skin; and that these nerves are separable into two sets, one having the function of bringing impressions to the brain, and the other of carrying the mandates of the will from the brain to the organs of motion—the muscles, by which the movements of the limbs are carried on. There is another system of nerves that we call the "sympathetic," but these we may leave out for the present. The brain itself is made up of white and gray matter, the white being only a mass of conducting nerve tissue, and the gray the receptive matter, which is spread out over the surface of the brain in a layer more

or less thick, and also collected into little masses in various portions of its bulk, which little separate masses I have called centres. Now, the gray matter is the living, active substance, which receives all impressions from without, and stores them up, and from which emanate all the actions by which the functions of life are performed.'

PADRE. 'Stores up impressions? What are impressions, and how are they stored up?'

PROFESSOR. 'An impression is an impulse that has been received on the terminal points of an "afferent" nerve, or a nerve conducting upwards to the brain, and has set in motion a molecular movement, or a vibration of the molecules or atoms of which the nerve is made up, which, propagated along it, reaches the receptive centre, or the mass of gray cells in which the nerve terminates. You know what a "cell" is?'

PADRE. 'A cell? I have heard of a prison cell, a hermit's cell, and the cellular structure of plants, also of Jaeger's cellular clothing.'

PROFESSOR. 'Well, all these represent in your mind an enclosed space, with something or nothing in it. Now, conceive an enclosed space, filled with atoms or molecules, the wall of the cell to be formed of a living membrane, but the whole so small that it is invisible to the naked eye, though perceptible enough under the microscope. Conceive the molecular atoms it contains to be ad-

justable and capable of adjustment by an impression—that is, a molecular action or movement propagated along the nerve filament, which terminates on the outside of the cell—which, as it were, shakes the molecules into a definite position as regards each other, and which definite position once made is retained.’

PADRE. ‘Yes ; I could conceive such a thing.’

PROFESSOR. ‘Good. Now, then, you can conceive an impression made on the terminal point of an afferent nerve being stored up in the cell. Well, a centre is made up of a mass of these cells, which is termed gray matter simply because to the naked eye it is so coloured. Now, the whole surface of the brain is made up of such cells, and in all the higher forms of living things the quantity of such matter is developed in a higher and higher degree, until in the highest form of animal—man—the mere surface is not sufficient, or would not be if it were a mere layer ; but it is plicated—that is, doubled up into convolutions, so that the surface is immensely increased for the reception of this gray matter.’

PADRE. ‘You would imply that in lower animals it is not so plicated ?’

PROFESSOR. ‘Exactly so. The lower the animal in the scale of intelligence, the less is the volume of brain matter and of the need of brain convolutions. The brains of the various species of

monkeys offer a series of developments of these surface-increasing convolutions, which lead from the almost plane surface of the brain of the marmoset to those of the anthropoid (manlike) apes, whose brains take on a convoluted surface almost, in the highest forms, constituting a perfect replica of the human brain, and actually superior in development to that of some human idiots which have been dissected. Moreover, the anterior portion of the brain in these series of animals to which the intellectual functions are attributed progressively increases in amount, relative to those portions which have been proved to be the organs of muscular motion only.'

PADRE. 'But I don't see that we are any nearer the materiality of thought.'

PROFESSOR. 'But you have not learned the whole of your lesson yet. Suppose an impression is made on the retina of the eye—for example, by rays of light passing through the camera obscura of which the eye consists, with its lenses, its diaphragm or stop, and its sensitive plate, the retina—and producing a picture on it, which picture is presented to the mind through the molecular movements set up by light in the filaments of the optic nerve, propagated upwards till they reach the optic centre, and are registered by molecular action in the gray cells of that centre. The grouping of the molecular atoms is the material

result of the picture presented to the eye, and is more or less permanent. Now, if you wish to recall this picture thus presented—that is, if you wish your memory to recall it—the presiding will in the great governing centre, the *imperium in imperio*, sends down by connecting nerve filaments an order, carried by molecular movements, to the receptive centre of the optic nerves, and a *replica* of the molecular adjustment in that centre is, in obedience to the mandate, carried up and presented to those groups of gray cells by the function of which the mind, as we call it, perceives it—that is, the picture which days or years before was presented to the eye.’

CURATOR. ‘Then you would suggest that there is a special memory for the impressions presented to the eye or the sight? Do you wish us to infer that every special sense has each its special memory?’

PROFESSOR. ‘Certainly. Seeing, hearing, smelling, tasting, feeling, and muscular action—all have special memories, all alike capable of independent development or impairment by education or lesion; and it is the special development of any particular memory centre which constitutes the characteristic endowment of the man of genius, and in that particular elevates him above his fellows, or at any rate permits of such particularization. The receptive cells of his organs of sense being more

highly developed gives him the material on which to work. Probably genius demands something more than this—a special development of the “perceptive” and “combining” centres and of the will itself. Given all these, we have the painter, the poet, or the orator. Doubtless there is an inherent, possibly an inherited, tendency to the superior development of any one centre of reception, and thus it may be literally true that “the poet is born, not made.”

PADRE. ‘But how far are you romancing, or how far have you facts to base your theory on? I am not yet a convert to your dictum that thought is mere matter in motion.’

PROFESSOR. ‘Possibly not. I do not expect to convert you in a day. You belong to a profession which believes that it has a monopoly of conversion, and one that from the beginning has presented the toughest front to conversion by science. But let me say that the scientific basis of what I have stated rests on the teaching and demonstration of the sciences of anatomy, of physiology, of pathology, and of clinical medicine. They are subjects far too large and deep to expound even superficially in a passing conversation. You are yet young, and your short life has been absorbed so far by study in one direction, but——’

PADRE. ‘Just so, my dear friend. You hope many things doubtless, but though so young my

receptive faculties find it difficult to assimilate so heretical a doctrine.'

CURATOR. 'Well, the Professor and I have finished our pipes, and regret that our young friend does not smoke. Perhaps the tea-table may by this time be laid on the lawn, and the ladies be ready to welcome us to the cup that invigorates.'

IV

BAMBOOS

BAMBOOS may be said to be the basis and framework of a subtropical wild garden. Their exotic aspect recalls the pictures of the tropical countries with which we are familiar, and when in sufficient masses and developed magnitude they make a jungle in which you may almost expect to meet the denizens of a tropical country. Their elegant forms have a grace hardly obtainable by any vegetable product of European origin, and although many of them come from a climate which in the winter months is hardly less rigorous than our own, they one and all possess the characteristic grace of Southern climes, and the elegance of form and motion bespeak their alliance to Southern types of life, and contrast in their delightful outlines and swaying forms with neighbours born of Northern latitudes, much in the same manner as the lovely figures and graceful attitudes of the belles of India and Burma con-

trast with the sturdier, but perhaps less symmetrical, sisters of Western origin.

And they have the great advantage of not losing their foliage in the winter, and when most of our garden plants are left leafless and bare, the Bamboos are still clothed in their summer foliage.

Thus, hardy in habit, yet exotic in aspect, they lend a character to the garden which fits it to receive and assimilate other yet more tropical forms of plant-life, and lead up through the broad leafage and brilliant flowers of the Cannas, the softly striated leaves and gorgeous columns of flowers of the *Heydygium*, so closely allied to the Arrowroots (*Marantas*), the broad soft leaves and elegant bell-shaped flowers of the *Brugmansias*, to the crowning glory of tropical foliage in the magnificent Banana, under whose spreading arches an elephant might stand for shade.

And when surrounded by these forms of Southern life, the garden I once tended in far-off India is vividly realized to me, and it only wants the gorgeous colouring of the magnificent *Dracænas*, and the brilliantly painted leaves of the *Crotons*, which attain to so great development in the Indian gardens, to complete the picture.

The simple English garden, garnished with the plants and flowers of Northern latitudes, has, indeed, many charms which I do not for a moment wish to decry, enriched as it often is with the

choicest flowers of many regions, and laid out with a taste and loving care which the gardens of other countries seldom evince, and capable of yielding a perennial source of pleasure. And while acknowledging the richness of colour, in vivid contrast, or matched in subtle combinations of tints, to be seen in the geometrical *parterre*, and the beauty that reigns in the herbaceous border, with its underlying associations of the memory with the forms of plant-life which recall the gardens of our childhood, and the trim excellence of ruddy pathways, and the soft verdure of the well-mowed lawn, I still think that the greater charm lies in the wild garden, uncurbed by restriction and order, however well ruled; free and unfettered by laid-out beds of geometric excellence, and the hard lines of the gravel path; graced and dignified by free-growing forest trees, yet unhampered by a fear of the shade their umbrageousness necessarily produces in the ordinary garden; unworried by the necessity of the constant use of the machine-mower, and permitting—nay, encouraging—the untrammelled growth of plants demanding room and space to exhibit their full development.

And it is in the wild garden that the tropical element so naturally comes in. Indeed, the Bamboo and the *Musa* can never look natural in the herbaceous border, where, stunted in growth and battered by exposure to wind force, they are

essentially different from those planted in lush, rich soil, and shut off from rending winds in the umbrageous depths of the wild garden, where all around is in harmony with their forms, and associated with the instincts of their nature.

I use the terms 'wild garden' and 'subtropical garden' almost indiscriminately in this little book in describing 'the garden that I love,' for, indeed, the wild garden has grown into the subtropical, and the foundation of this expansion has been the planting of the Bamboos. They have formed, as I have said, the framework of the structure and the basis of the idea thus evolved, and, indeed, are the only solid and persistent elements; for, with the exception of some hardy Palms, all the other plants from Southern latitudes have to be taken up ere the winter begins and replaced in the early summer.

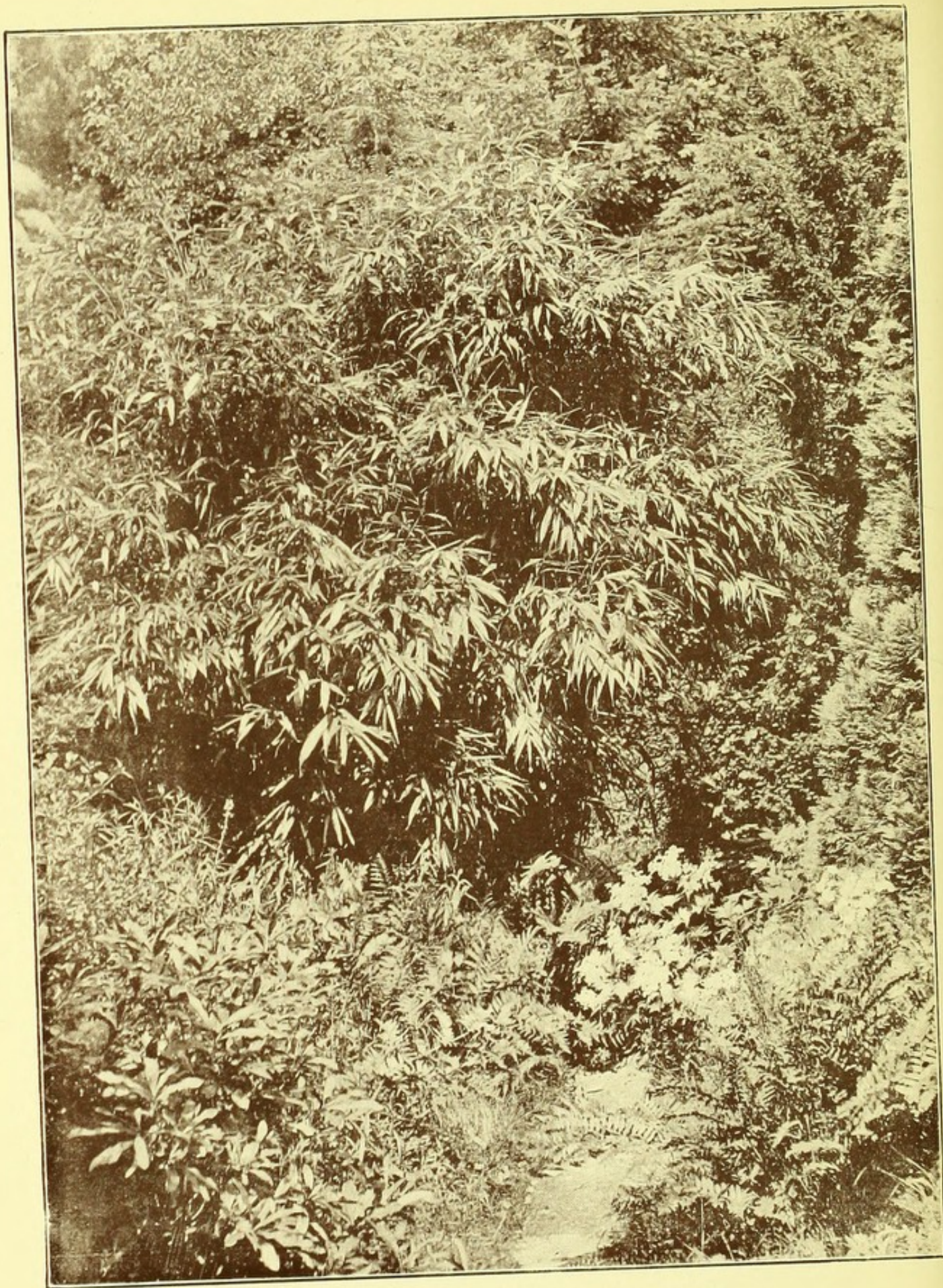
There are many species of Bamboo, and, indeed, the order is divided into three chief sections by botanists, who have discovered certain minute but definite variances in the construction of the flower; and botanists delight in finding out minute differences and founding new names upon them.

Then, not content with three chief sections, they have subdivided these into three subsections, and these, again, into groups. Happily, they cannot carry their divisions much further. Well, accept-

ing their classification as being useful to the gardener to some extent, we find that all, or nearly all, the hardy Bamboos that come to us from the East may be ranged under the subsection *Arundinariæ*, and the groups into which it is divided are *Arundinaria*, *Thamnocalamus*, and *Phyllostachys*. We may ignore the middle one, and in its place put one from the three primary sections—viz., the *Bambusæ*; it is only a question of stamens and bracts.

But it is useful to have a classification, because the nurserymen who import the young plants from the East use it, and arrange the names given to the various Bamboos under it; and for this reason, if you want to order any specific one, you should know its scientific name. But, alas! even if you do this, it does not always insure your getting the right plant—*i.e.*, the one you require—for there are, I regret to say, very few nurserymen who sell Bamboos that know a *Phyllostachys* from an *Arundinaria* (there are, however, some honourable exceptions, I hasten to admit). Mr. Freeman Mitford,* in his charming book on 'The Bamboo Garden,' states that on one occasion he ordered from as many nurserymen five different kinds of Bamboo, and received from *all* one particular species which was *not* included in the list, and which he did not require. Indeed, since I have

* Now Lord Redesdale.



ARUNDINARIA METAKE (A HARDY BAMBOO).

become able to know the different characteristics of some of the better-marked varieties, I have found that the names of those supplied me as given by the senders are in several instances altogether wrong, and I have known them under wrong names; but have not loved them the less, 'for the rose under any other name would smell as sweet.'

The *Arundinarias* and the *Phyllostachys*, which are the two groups which contain most of our hardy Bamboos, differ so materially on broad points that we can easily distinguish them. The stems of the *Arundinaria* group are clothed more or less completely with the sheaths which protect the young growing stems even to old age; in other words, they (the sheaths) are persistent, whilst those of the *Phyllostachys* group have naked stems, as the sheaths fall off when the side branches grow out. And again the branches of the first group are evolved from above downwards—*i.e.*, they appear first at the highest part of the main stem, and are developed before the lowest branches begin to show themselves—whilst in the second group it is exactly the reverse: the branches spring out from the base or lower part of the stem first, and are developed upwards in succeeding gradation; so that you have only to watch the development of branches and the persistence or otherwise of the sheaths to know at once

into which group to place your specimen of Bamboo.

When speaking of the several species of Bamboo in the wild garden, I have called them all Bamboos, lest the inexperienced reader (for whom I write), if I named a plant *Arundinaria Japonica*, or *Phyllostachys aurea*, might imagine something other than a Bamboo, to his mystification. But they are indeed all Bamboos alike, and it is necessary only to recognise which is an *Arundinaria* and which is a *Phyllostachys* when ordering them from a nurseryman.

As regards recognising any individual of the several groups, it can only be done by becoming familiar with its special characteristics, and I am bound to say that with the loose description given in the nurserymen's lists this is a matter of considerable difficulty; and even with the lucid characterization given in Mr. Mitford's book it is not easy in many instances, especially with young plants, which take several years to develop their distinctive points.

Bamboos, as a rule, never flower in the English climate, and happily for us that it is so, for when they flower they die.

Most of them in their own native habitat do not flower for many years, living a long life free from any reproductive instinct; and then when the subtle influence reaches them they put out all

their vital power in one great effort for the reproduction of their species, and die in the attempt.

There is a great mystery involved in this subject, almost as deep as the mystery of life itself.

Whenever the influences, whatever they may be, culminate in the decree that a certain species of Bamboo shall flower and produce seed, every individual plant of that kind, young and old alike, responds to it. The full-grown mature plant and the younger shoots just risen above the ground are all alike compelled to expend their vital energy and yield up their life to the behest. There is no exception to be allowed to this conscription; none are too old and none too young to be exempted; all are dominated by this irresistible influence and all succumb. It is not the age of any particular species, or family, or tribe of the genera; I mean that this does not occur after a fixed number of years.

It cannot be any particular characteristic of climate or season, for on one occasion a species of Bamboo flowered on the northern coast of Africa, and was followed a few weeks afterwards by the flowering of the same species in France and elsewhere, wheresoever found. It is not the influence of soil or water. Can it be due to a bacterium?

If an epidemic of influenza or of break-bone

fever can start in any locality of the East and travel round the world ere it ceases its extending circuit, either born of a particular bacterium, which has suddenly from its latent form sprung into such vitality that neither time nor space opposes any effective obstruction to its extension, might not a microbe be the motive agency that rouses the reproductive faculty in the plant? We know that a somewhat similar phenomenon is exhibited in the life-history of certain forms of animal life, mice and voles are occasionally seized with this mysterious influence, and reproduce their species in such incredible numbers that they burst like an uncontrollable flood over portions of the world, and create a plague which rivals one of those which Moses set free over Egypt. Not long ago a particular district of India was devastated by a horde of mice, which, originating no one knows whence, swept a whole province of its grain crops, and having expended its vital energy happily died out.

And has not the world seen something like this affecting the human race, in the sudden migration of vast hordes from a wilderness which under normal conditions was fitted to produce and maintain only a fraction of their numbers, and which indeed for ages only produced such a fraction, but under some mysterious influence the numbers increased in such abnormal fashion that

emigration on a sudden and unheard-of scale sent out a vast wave of human beings maddened with a furor of devastating energy, and continued to do so for some years, until the occult influence, whatever it was, being expended, the normal laws of life again asserted themselves?

V

ODDS AND ENDS

A SILVERY laugh, perhaps a trifle too high pitched, met us (the Professor and me) as we were going down the winding path to the garden, and as we turned a corner the Padre and the 'Daughter of the House' came into view. I thought that there was a slight flush on the cheek of the maiden and a somewhat corresponding hue on that of the Padre, who met us with hand out-held.

'I have been showing the Padre the Hedychium, which is in flower, and we imagined that we might find you down there,' said the maiden, who there-upon left us, while the eye of the Padre followed the light-toned hues of the muslin gown as it vanished down the path.

'Ah! the Hedychium must be in grand flower just now,' said the Professor. 'It seems to have found a congenial home in the wild garden, and certainly it is in keeping with the exotics.'



THE WINDING PATH TO THE WILD GARDEN.

‘It belongs to a family that is truly exotic,’ I said, ‘and includes the Indian Shot (*Canna Indica*), the lordly *Alpinia*, and the still grander Banana (*Musa*) and the Arrowroots (*Maranta arundinacea*) and the Ginger (*Zingiber officinale*). I hope to try if the *Alpinia* will bear being planted out in the English summer; it was a charming addition to our Indian garden.’

The wild ducks had heard my voice as we approached the little gate, and began their quacking from the recesses of the lower pond; for they recognise me by my voice, and when I whistled as we passed under the Deodar came flying up in a group, and plunged into the water with a swish that sent the little waves swirling up to the further bank; and the coquettish water-hens, startled by the presence of strangers, scuttled across the water-lilies to the refuge of the island.

‘The mallards have lost their magnificent plumage,’ said the Professor. ‘How queer they look disguised as the hen birds!’

‘Yes, indeed,’ said I; ‘they have discarded their marriage finery and assumed their every-day clothing, but they will don it again ere the winter begins. No doubt it became dishevelled by their bickerings and fightings during the honeymoon time, and wanted renewing.’

‘I wish the water-hens would come out,’ said

the Padre. 'I love to catch a glimpse of their charming movements and mincing ways as they deliberately plant their dainty feet and switch up their pretty tails in moving along. They are born coquettes, and air their whims and graces like one of their betters, only they have not a silvery laugh.'

The Professor winked at me.

'This pair has resided here,' I said, ignoring his wink, 'for the past seven years, and I thought them models of conjugal fidelity, although I did not admire the way they dismissed their broods when fully fledged to bear the buffetings of the outer world, with no experience to guide them and no parental care to protect them. This year, however, my idea of their strict conjugal fidelity received a blow. It seems that the male bird had strayed some distance from his home, and met—it is to be hoped by accident—a fair deceiver of his own species, who beguiled him to set up a separate establishment for her on the bank of a pond in front of the house some quarter of a mile from this spot, and there she reared an opposition brood of little ones. I saw her there all the summer in her single loneliness, only relieved now and then by a clandestine visit from our friend here, who was frequently seen flying across the intervening distance. The pair here lost their first brood of chicks, although they reared successfully the

second. Possibly it was a just nemesis on the sins of the male parent.'

'What an ornithological scandal!' said the Professor. 'If it is true that the word comes from the Greek *scandalon*, a "stumbling-block," and is connected with *skambos*, "crooked," it must be just the word to apply to such conduct.'

'Yes,' said the young man just come from Oxford, 'I think it suits it well enough, but I suppose that they have no civil courts in which to obtain damages.'

'They may not have,' I replied, 'but I am certain that if such conduct had occurred amongst the rooks the offender would have been tried by judge and jury, and condemned without mercy.'

'Perhaps the law of Moses is in force amongst the Rallidæ, and the little Gallinule was the widow of this seeming offender's deceased brother,' quoth the Professor.

We had moved round to the upper garden above the pond, and towering over the surrounding herbage of *Spirea* and *Hemerocallis* the stately form of the *Lilium giganteum* lifted its crown of pure white flowers to sight.

'What a magnificent flower!' exclaimed the Padre. 'To what part of the world do we owe such a splendid gift?'

I explained that it came from the deep gullies of the Himalaya Mountains, and to my mind's eye

came the picture of its gorgeous surroundings : the mountain - sides clothed with umbrageous Deodars ; the wealth of climbing and trailing plants, with flowers of every hue ; and towering above the mountain peaks, rivalling in their pure white masses the maiden purity of the lily now before us.

‘ Yes,’ said the Padre, in response to what I had suggested ; and he added : ‘ I suppose you know the lines of Gerald Massey :

“ As the sunshine on the hills
All the arms of ether fills
With the glory of its loveliness a creature as of light :
And it looks up in heaven’s face
With all a virgin’s trusting grace,
So the maiden walked on purity’s white height.” ’

‘ Ah ! but there is a second verse,’ I said.

“ But the snow will blush for bliss
At the red dawn’s fervent kiss,
And fall from its white height, and lose the beauty
from its brow,
And be trampled in the highways,
And be trodden in the by-ways,
So the maiden’s life is stained and trampled now.” ’

‘ God forbid !’ said the Padre.

‘ Let us smoke,’ said the Professor.

When we had reached the seat under the great Pine the Professor asked me what news had been

received of the terrible prevalence of the plague in Bombay.

‘Nothing reassuring,’ I answered. ‘My letters from Bombay paint the scene in the most desponding colours. The condition of the “city beautiful” makes my heart bleed for it.’

‘Will the pestilence reach England?’ asked the Padre, with some solicitude in his voice, not perhaps for himself alone.

‘It has already reached Europe,’ I replied; ‘but one can hardly imagine that it can force the hygienic ramparts which science has placed around our community as it did more than once in the old days, when there were no such protections at all; and now that science has discovered the microbe which causes it, we feel that we have something tangible to oppose, not like an unseen immaterial enemy, whose advent is invisible and ways mysterious.’

‘Is this disease of very long standing in the world’s history?’ asked the Padre.

‘Perhaps the oldest known record is that in the historical books of the Old Testament; surely you are acquainted with that?’ I replied.

‘I know my Bible history, but I am not aware that this particular plague is described,’ said he.

‘Yet the evidence,’ I said, ‘is conclusively clear. The two salient facts which latter-day evidence has adduced are the prevalence of buboes, or en-

larged glands, hence the term bubonic plague, and the essential part which mice and rats play in its propagation. An epidemic amongst the rats (who were found to have died of plague) preceded every outbreak of the pestilence during the past three years in Bombay. Amongst the wars which the intrusion of the Israelitish tribes into Palestine necessitated, you will remember that about 1150 B.C. the Philistines—as the old writers collectively called the original tribes who inhabited the country—got the best of it, and the Israelites, in desperation, brought the Ark and carried it into battle, only to suffer a severer defeat and to lose the sacred chest, which was then carried in triumph to Ashdod by their enemies, and the sacred symbol was deposited in the temple. Passing over the mythic tale of the fall of Dagon, which the writer has interwoven in this most graphic story, we hear that an epidemic of bubonic plague broke out in Ashdod and the surrounding country, “for they were smitten with emerods (*i.e.*, buboes) both small and great, with a very great destruction,” and in their consternation they set it down to the presence of the ark; so they sent it “about the country” and lodged it in Gath, where, of course, the plague broke out again, and the people hurried it off to Ekron, where the calamity was worse than before.’

‘But you seem to infer,’ interpellated the Padre,

‘that this was a natural result, and not a mark of Divine wrath for their insolence in taking the ark.’

‘I am considering the history of the outbreak from a scientific point of view,’ I replied, ‘and undoubtedly the ark and the people who carried it were the disseminators of the plague. Well, to cut the matter short, and to deprive the story of its wealth of graphic description with which the sacred writer has embellished it, the distracted inhabitants determined to get rid of the ark, and sent it back over the border to Bethshemish, where the pestilence again broke forth and destroyed some 50,000 people. But mark: in order to appease the god of the Hebrews, they sent a trespass offering of five golden emerods, the symbols of the most conspicuous symptom of the bubonic plague, and five golden mice, the recognised agents of the spread of the catastrophe. And thus the story affords the most conclusive evidence of the character of the pestilence.’

‘Strange it is,’ said the Professor, ‘that a certain class of students read their Bibles in a frame of mind imbued only with the one-sided spirit of the chronicler.’

The Padre looked somewhat glum.

* * * * *

The tea-table, with its silver appurtenances, was ready to greet us as we returned to the terrace,

and the view down over the valley and the distant river was unusually lovely. The far-off hills were apparently bluer and nearer, and the homesteads and the spires of the distant villages were more distinct than usual—one of those rare and charming results this hot summer of a greater amount of moisture in the air, and of the shadows cast here and there over parts of the underlying country by floating masses of cloud.

Some big steamers, under tow of seemingly insignificant little tugs, were making their way up stream, aided by the incoming tide, and so transparent was the air that the masts, funnels, and rigging were distinctly visible. In the middle distance the cows grouped themselves on the pasture round the farm-houses waiting for milking time; and the sheep dotted the nearer fields, in white contrast to the greenery, while a thrush in the neighbouring thicket was pouring out a flood of melody.

‘There is a change of weather impending,’ said the Curator; ‘the distant view seems so near.’

‘Diaphaneity,’ quoth the Professor.

‘Hum!’ said the Padre, ‘a long word—*dia*, through, and *phaino*, to shine or show. Why must you scientists necessarily use long words?’

‘To save the use of many short ones,’ replied the Professor; ‘we cannot afford to be so long-winded as a sermon-maker.’ He was unneces-

sarily aggressive this afternoon. Happily, just then the ladies came out through the French windows of the drawing-room, and the younger one seated herself at the tea-table.

‘I hope that the Pater has satisfactorily exhibited his *Hedychium*,’ said she.

‘What a curious habit you all seem to have of applying synonyms!’ replied the Padre.

‘What a charming word!’ she said, handing the tea with a smile that might be derisive or appreciative, and which elicited a relaxation of feature of a somewhat grimmer type from the Professor.

‘*Tu quoque*,’ muttered he through his beard.

‘Greek and Latin!’ said the maiden with the laughing eyes. ‘Is not English good enough?’

‘Have you read this delightful book,’ asked the Mater (who had detected the shadow of latent opposition in the air), ‘by an Englishwoman on her German garden? It is one of the freshest and most entertaining books of the season, and my husband has revelled in it.’

‘All books on gardening,’ interpellated the Curator, ‘are essentially entertaining to me; but why has it become the fashion to interlard them with poetry and fiction, or even, as I found the other day, with recipes for making dietetic messes, using the word, of course, in a biblical sense?’

‘Biblical sense!’ quoth the Padre, with a tinge of bitterness in the tone which threatened to present itself in a severer form of protest, but which faded into air under the dissipating influence of a silvery laugh from the presiding genius of the tea-table.

‘They were each and all delightful reading,’ said the Mater; ‘but I think that I enjoyed the one with the recipes the most.’

VI

TENDER EXOTICS

THE tender exotics are, as a rule, only summer occupants of the garden, and require to be taken up before the later autumn frosts can exert their benumbing and destroying effects. This necessitates, no doubt, a good deal of trouble and labour, but these are amply compensated by the beautiful results which these charming products of southern skies and warmer climates yield when grouped amongst the plants and flowers, hardly less beautiful, of the English garden.

Not, indeed, that many of the latter have not in their time been exotic, for almost all the better class of fruits, and not a few of the flowers, have been imported and acclimatized; but I speak now of the non-hardy exotics as a class, as those plants of foreign origin which, on being struck by frost, are either killed or at least levelled to the ground, some, indeed, to recover and shoot up again with the returning summer, and which therefore may

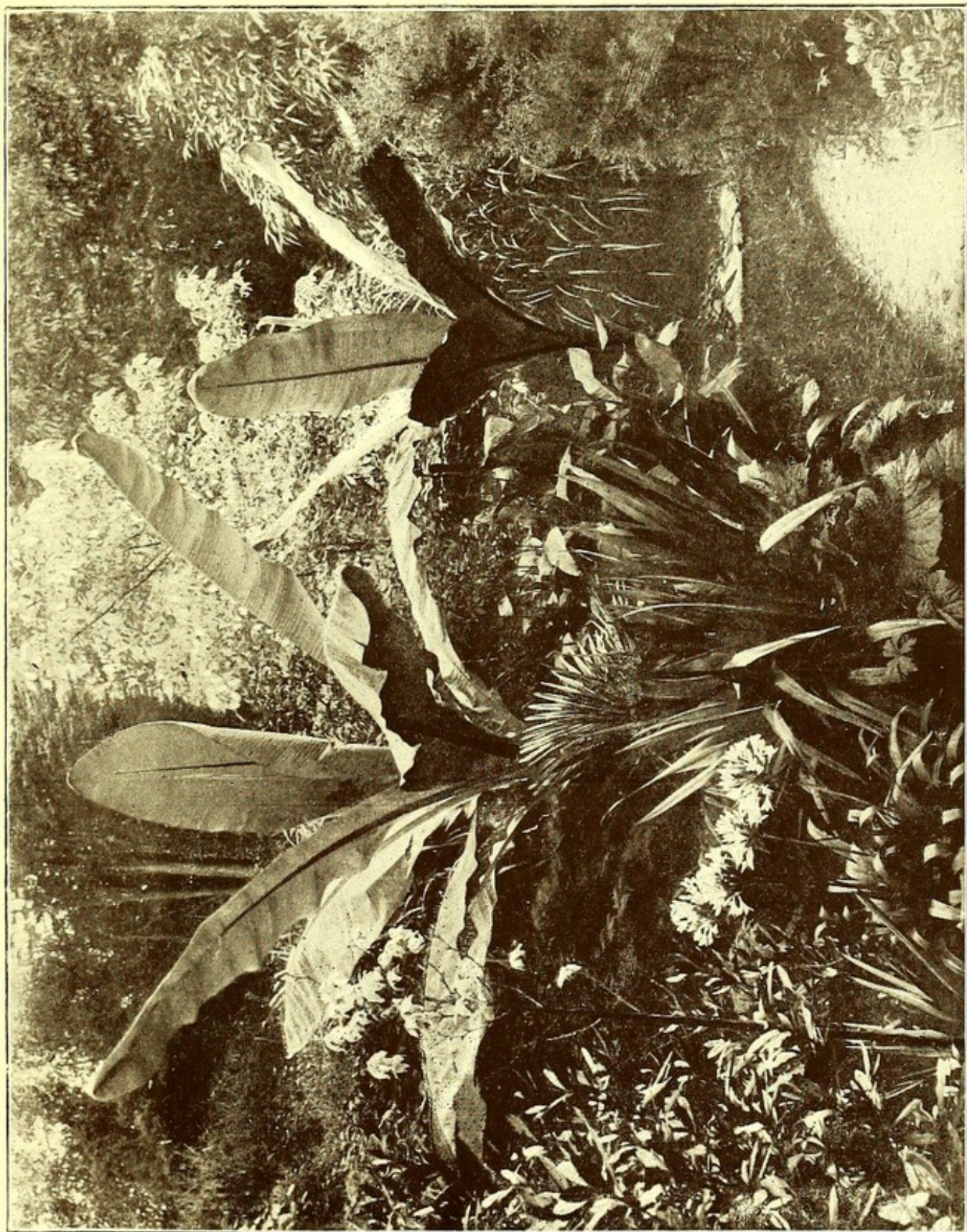
be allowed, protected as much as may be necessary, to remain where planted, but others which must be wintered under glass.

All have more or less luxuriant foliage or gorgeous flowers, and some have both, but amongst all the more luxuriant ones the Banana (*Musa Ensete*) takes the first place.

It does not flower in our climate, but its gigantic leaves, when protected from the wind, are simply magnificent, and in the matured plants of some years' standing the leaves, rising from their broad bases, extend up from 12 to 16 feet in height, and then arch over, while from the centre of this grand rosette rises the new leaf, tightly at first, rolled together like an umbrella folded up, and then, gradually unfolding and expanding, shows another leaf more tightly folded within it, which in turn will expand to bring another into view.

The largest I possess are some eight or ten years old, and every year they have grown more magnificent, until they now exceed anything I have seen in England, and rival their predecessors which I saw on the lower slopes of the Abyssinian mountains, their proper habitat.

On bringing them down from the glass houses where they are sheltered during the winter months, their splendid leaves get broken and dishevelled, but a few weeks after planting their new ones are



MUSA ENSETE (THE ABYSSINIAN BANANA).

ready to take the place of the broken ones, which are then cut off, and during the summer months they rarely acquire a rent.

There are a number of smaller specimens which I have raised from seed sown in successive years, which will gradually acquire the same magnificence ; meanwhile they occupy sheltered nooks in the garden, and add materially to its tropical effect.

There are a dozen species or varieties, all more or less beautiful, but only a few that will bear planting out in our English gardens. The species *Ensete*, from Abyssinia, is the chief of these in size ; but I have one from China, the *Musa Sinensis*, which promises to be, when fully matured, a beautiful variety, as it has bars of purplish colour across its leaves, and apparently a tall habit, as its fronds do not all arise from the head of the stem, but some few inches one above another. It is, however, too young for me as yet to judge of its matured effects.

And there is a third which I have lately heard of, which is said to be hardy, and comes from Japan. If really hardy in our climate it will be a great acquisition.

The name (*Musa*) is said to be derived from Antonius Musa, the physician of the Emperor Augustus, who, I presume, must first have imported into Europe some of the species.

But the Arabs call the Banana *Mauz*, and this may have been the origin of the name.

Their successful cultivation demands absolute protection from wind, as the huge, sail-like leaves catch every eddy, and if subjected to rude gusts split up from their margins into ribbons, and soon present the dishevelled and forlorn condition usually seen in the public parks, when no idea of their real beauty is conveyed. They like a rich, loose soil, and demand, as the evaporation from the wide expanse of their foliage is necessarily so great, an ample supply of water, either by irrigation or by means of the hose. I usually turn on a stream of water to the soil of the larger ones for several hours together in dry weather.

Under glass the smaller fruit-bearing varieties of the Banana are cultivated, and certainly are beautiful objects, but they do not acquire the magnificent proportions of the *Musa Ensete*, and have not, in my opinion, the charm of those growing free in the wild garden, and consorting with other more or less tropical varieties of plants. The products of the conservatory and hot-house are very beautiful, but plants thus treated have to me the appearance of wild animals encaged. Healthy they may be, and apparently thriving under the conditions, but cabined and confined, wanting the blue sky overhead and the amplitude



CANNA EHEMANNI (THE GREAT CANNA).

of atmosphere around them, and yielding a sense of crowding and artificiality which those in the open air are entirely free from.

As a rule, too, plants like these, under artificial conditions, rarely attain the same luxuriant growth and freedom of spread, as if they, too, felt the sense I have described of being shut up.

Perhaps the Cannas may be considered next, as they bear the same type of foliage, though in a far lesser degree, and, indeed, they belong to the same natural order, *Scitamineæ*.

This is not so essentially a plant of the subtropical wild garden, for they are at home as a centre-piece for the lawn, yet they admirably suit the subtropical one, and harmonize thoroughly with its special characteristics.

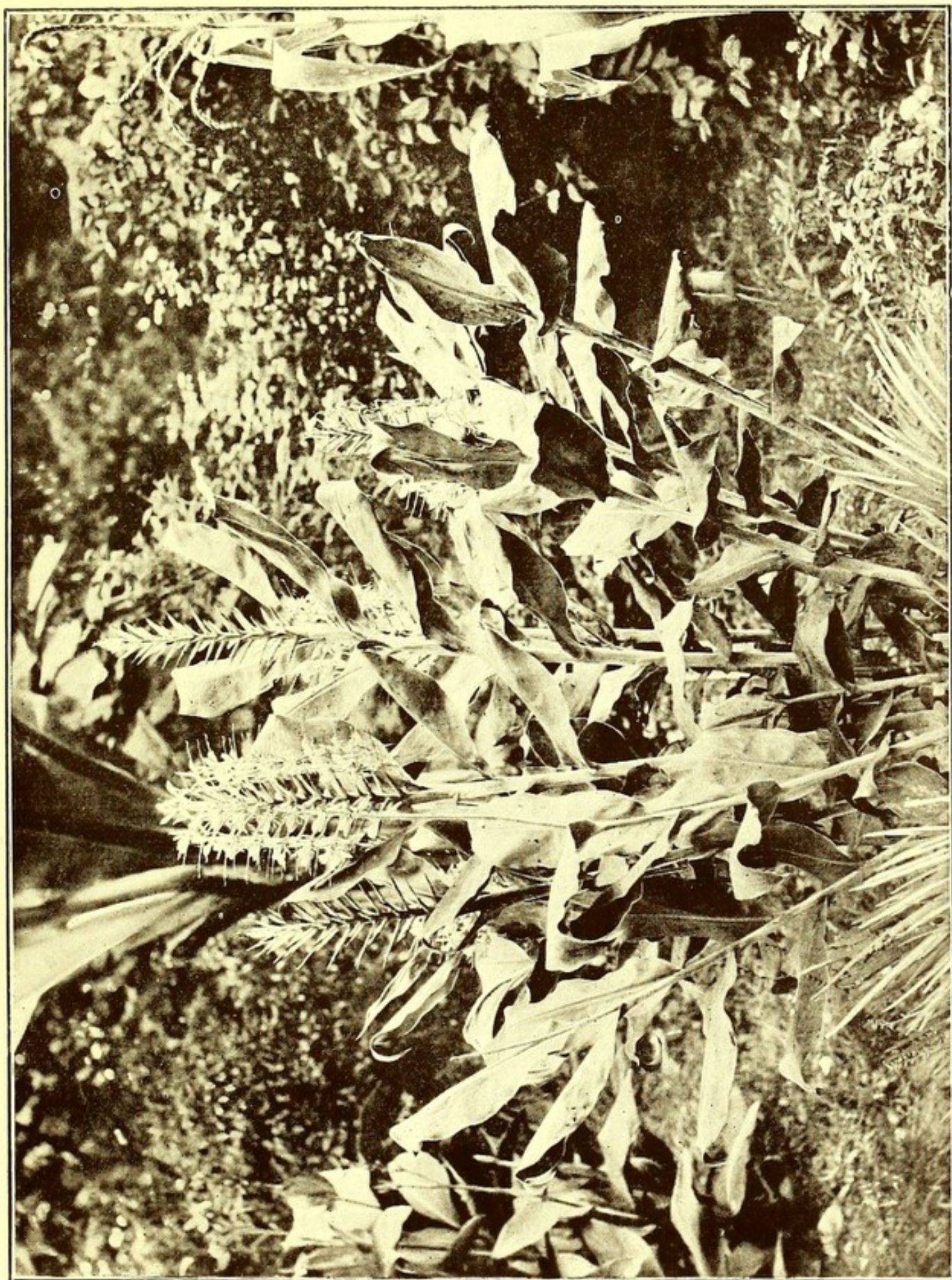
They do, however, look well in a mass, and for a mass a bed must be prepared, round or oval; yet even a bed filled with such flowers is not out of place here. The rich green of the large ovoid foliage, clothing the tall stems, crowned with spikes of rich-coloured flowers, chiefly orange and scarlet, together yield a charming effect, and the aspect reminds one strongly of the Indian garden, where they are important perennials.

There is, however, one Canna which deserves other treatment—the noble *Canna Ehemanni*, which should always have a place by itself in company with truly tropical forms, such as the

Ricinus or the Tobaccos. Its leaves are far larger than those of the ordinary kind, and can only be seen to advantage when the plant has room to bend them over in a more graceful attitude than a mass permits. The tall stems rise boldly above the foliage, and arch over and terminate in a cluster of flowers, large and symmetrical, and are coloured the purest rose. I have always reckoned this plant as one of my treasures, combining rich foliage with the loveliest coloured flowers.

Cannas require to be taken up in the autumn and laid by, and when the spring arrives they begin to shoot, and should then be earthed up and watered, and gradually hardened off for again planting out. They may be raised from seed except the *Ehemanni*; it has only once given me a few seeds, but when once a stock is secured it may be increased by the division of its roots.

The *Heydichium Gardnerianum* belongs to the same natural order, and is in many respects an allied plant to the others in aspect and habit. It, too, has large, soft, ovoid leaves clinging to the stem at the base, and arching outward on all sides. They are thicker and of a richer texture and aspect than those of the Canna, and exhibit soft bars of deeper green, radiating from the central midrib. The stem is about 5 feet in height, usually bending over in a graceful curve, and crowned with a spike of flowers from 12 to 15



HEDYCHUM GARDNERIANUM.

inches high, presenting a conical mass of bloom, orange and red—*i.e.*, the Perianth is orange, with scarlet stamen-like filaments projecting out. The orchid-like flowers, of which there are from sixty to a hundred, are arranged in a radiating manner from base to apex of the central column, and the whole effect of a well-developed plant exhibiting these masses of colour above the rich green of the foliage below is very striking. It is a native of India, and requires to be treated as a foreigner; but if taken up and potted, or placed in a tub in the autumn and brought under glass, it loses nothing in the process, and although its shoots may be springing from the ground when transferred to the tub, they go on growing unchecked, to flower in the following summer. The stems are sheathed, like the Canna, with a membranous expansion, which clasps them round, and they bear a bloom like the peach, which enriches the effect.

Amongst the soft-stemmed and soft-leaved plants from India which do well in the summer of our year are the Castor-oil plant (*Ricinus communis*), the *Palma Christi* of old, and the Tobacco (*Nicotiana*), the former belonging to the *Euphorbiaceæ* and the latter to the *Solanaceæ*. Both are well known for their large soft leaves and tropical aspect, the Castor-oil plant especially so. It looks quite at home in the subtropical wild garden, and a distinguished adjunct, with its great palmate

foliage often more than 2 feet across; and it is for these alone that it is to be valued, for its inflorescence adds but little to its appearance.

The Tobaccos, on the other hand, have a value, so far as aspect goes, both in leaves and flowers. The greater ones, from Mexico, growing some 6 feet or more in height, with racemes of rose-coloured flowers, are handsome plants, but have none of the delicious scent of the smaller white-flowered variety (which, too, is hardy in mild winters). Both the former, if left in the ground, are killed by the frost, and it is better to raise them from seed annually than to attempt to make them perennial by wintering them under glass. These are almost the only subtropical plants that I care to treat as annuals. In order to insure the best results the seed should be sown in heat, and the young plants pressed on rapidly, shifted into larger pots with rich soil, and as large a growth obtained as possible before planting out.

The *Daturas* belong to the same Natural Order as the Tobacco, and although all the family may be used with advantage, the *Brugmansia* is the most worthy member.

This stately and handsome plant, also from Mexico, is thoroughly in keeping with the tropical garden. Five or six feet in height, under an umbrageous head, it hangs its long, white trumpet-shaped bells by their slender stalks to sway in the



BRUGMANSIA KNIGHTI

breeze, and to fill the atmosphere of the garden at evening with their powerful perfume. So late as October this year they showed fresh blooms ready to be developed into beautiful flowers, and had there been no frosty nights to check their progress, and to render necessary their being relegated to the milder climate of the glass-house, they would have continued flowering.

The *Wigandia Caracasana*, a native of the mountainous regions of New Granada, is described by the talented author of the 'English Flower Garden' as 'entitled to hold a place amongst the finest plants of our gardens, from the nobility of its port and the size and form of its leaves.' It is somewhat difficult to procure, and I only succeeded in obtaining it this year. In its native habitat it attains a height of 12 feet.

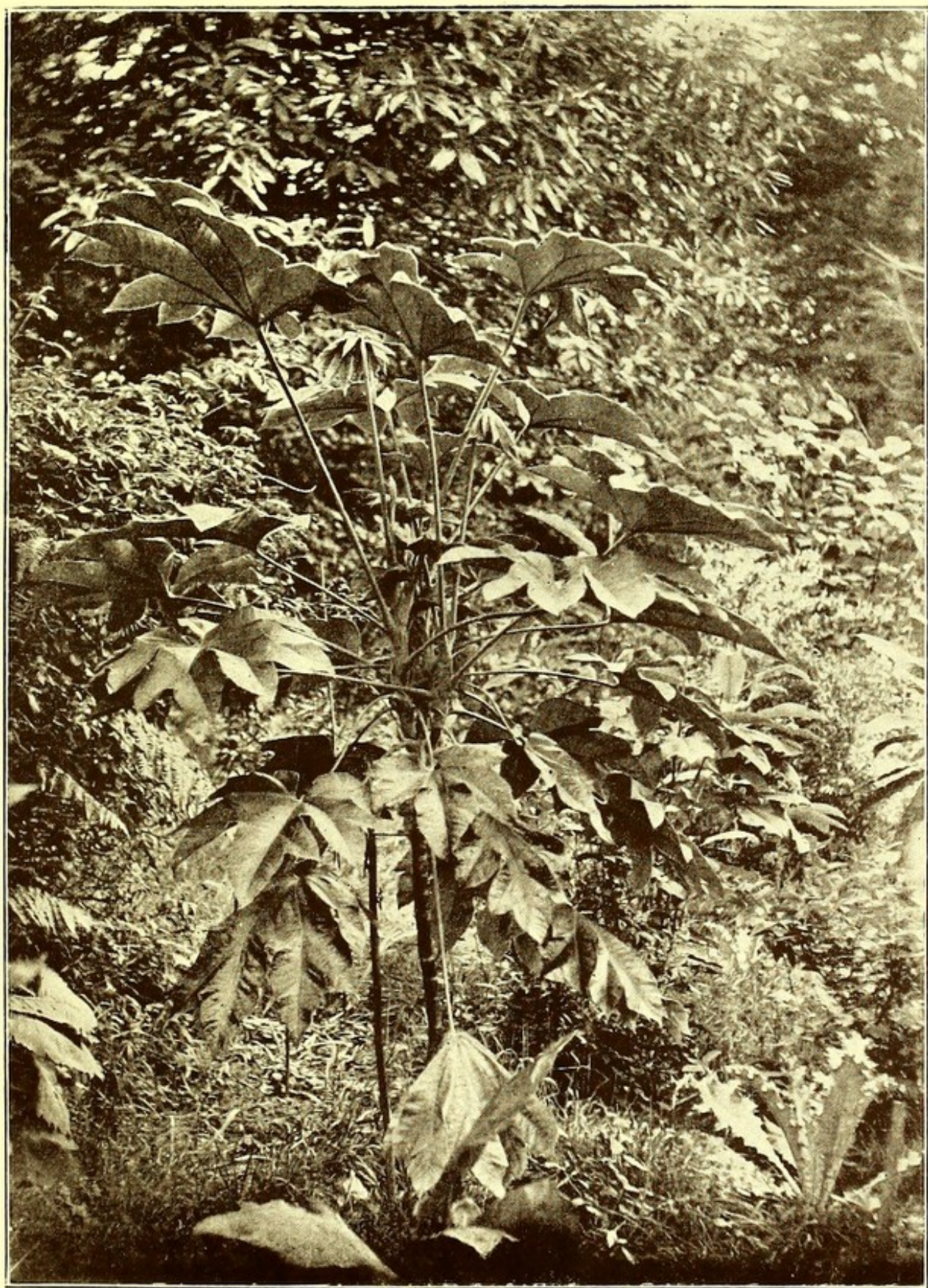
But a plant that I have also recently acquired—the *Senecio Arborea*—will, I think, be equal to it in richness of foliage and stateliness of growth.

Most of the *Senecios* are humbler plants, with variety in the shape and aspect of their leaves, but all more or less having flowers of the type of those of the common Groundsel, of which lowly weed they are congeners. The plant, though young, has already leaves 18 inches by 12 inches, of a rich glabrous green colour, and its stem is stout and erect, and, together with the leaf stalks, is a dark purple in colour, with whitish glandular

nodules studded thickly over the upper half. The leaves have deeply-marked veins, and bend over in a manner that adds to the beauty of the whole. It should be an acquisition to the wild garden, but whether it will prove hardy in our climate is doubtful; but our winters vary so much in intensity that the experience of one may prove fallacious. I have a *Eucalyptus* (Blue Gum) some 20 feet high, which has withstood the cold of three winters, but is liable to be killed by the coming one should it unfortunately prove a severe one.

The Aralias are well known in the instance of *Aralia Sieboldi*, a Chinese plant, which most amateurs grow in the green-house, but which in well-protected spots is hardy, and whose broad, deeply-cut, leathery leaves fit it for a place amongst tropical plants. But the *Aralia papyrifera* is a far handsomer plant, with freer growth and more beautiful leaves, almost as deeply cut, but soft in texture, and, together with the leaf-stalks, covered beneath with a powdery, white substance, which, by contrast, adds much to the beauty of the foliage. It is a native of Formosa, and derives its distinctive name from the fact that the natives of the island make a paper from its pith, which is the so-called rice paper of China.

I have a third species from Cashmere, but of very different habit. It has smaller leaves, borne on spreading branches, and, but for its inflo-



ARALIA PAPYRIFERA.

rescence, would with difficulty be recognised as an *Aralia*. It dies down every winter, but springs up rejuvenated with the succeeding summer. This family, the *Araliaceæ*, has but one representative in Britain, which is the common Ivy, but it does not require to be a botanist to see the likeness of the inflorescence in them all.

The *Sparmannia*, a native of Africa, is allied in aspect (only) to these soft, broad-leaved plants; but in addition to its foliage it has large umbels of white flowers, with barren, yellow filaments with purple tips, which together are very ornamental. The only drawback is that it flowers in May—rather too early to add to the glories of the subtropical garden, which are best seen later in the season.

Amongst the largest-leaved foliage plants the *Rheums* take a prominent place. The genera are widely scattered over the Eastern world; Siberia, Eastern Asia, the Himalayas, and Thibet have all yielded specimens for our gardens.

The medicinal product of some of them, chiefly the varieties from China and Southern Siberia, was well known to the Ancients, and indeed to the Moderns, up to the time of our boyhood, when we had the unpleasant duty occasionally of swallowing the powdered root—a crudity, happily for the succeeding generation of boys and men, obviated by the less distasteful and better disguised medi-

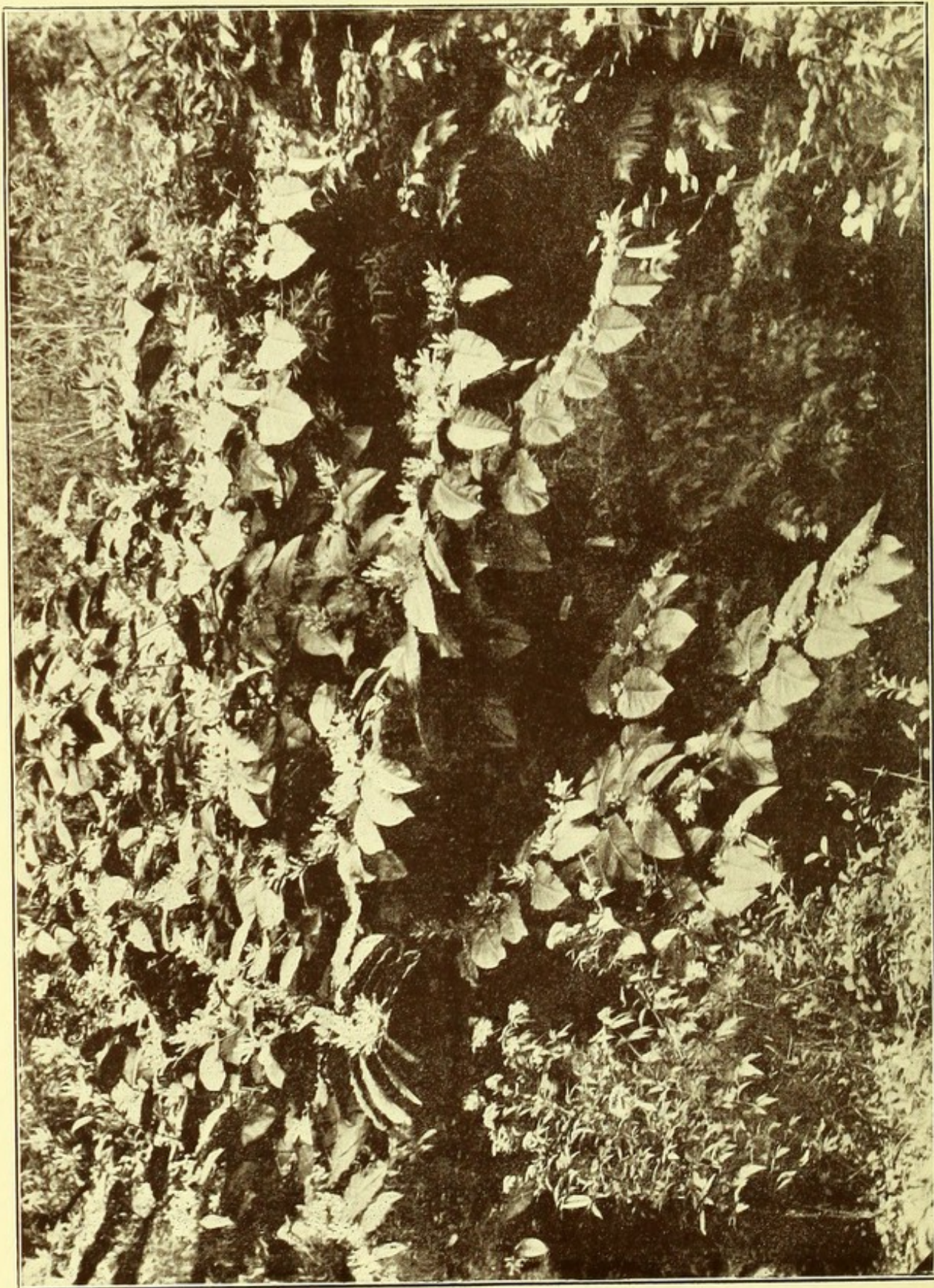
cinal preparations of the present day; but the name also has pleasant associations, for Rhubarb tart and clotted cream is a form of aliment which boys and men alike may enjoy. The species which yields this is the *Rheum undulatum* chiefly.

Perhaps the handsomest foliaged garden variety is the *R. palmatum tanguticum*, whose leaves are markedly veined, and beautifully and deeply incised at the edges, giving a very handsome formation. Several of the others have huge leaves, forming a very ornamental mass of foliage. Those of *R. Emodi* have well-marked red veins, and *R. nobile* thoroughly deserves the cognomen from its grand aspect. All throw up tall flowering stems from 5 to 10 feet high, with spikes of small flowers extending over some feet of the stem, which adds to the general effect and supplies the artistic relief wanted by the widespread mass below.

They are essentially wild garden forms, demanding ample space and shelter for their huge development, and should be planted singly. Mine are either located on the rising bank of the upper part of the garden, or in wide open corners and spaces between the shrubs of the lower part.

The name is derived from the old Greek *Rha*, and the educed adjective *Rheon*, and the Ancients called it *Rheon Barbarum*, whence our 'Rhubarb.'

The Polygonums are a somewhat recent addition to our gardens—at least, the larger leaved



POLYGONUM SACHALINENSE (THE SAGHALIAN POLYGONUS).

ones—for many of the members of the family are British.

The exotic ones are tall and striking objects, especially suited for the wild garden, where they may have ample space, and are most at home on the flat bank of a pond, in damp soil, where they flourish luxuriantly and require to be restrained from extending too far.

Polygonum Sieboldi or *Cuspidatum* is the one most commonly met with in gardens. It has ovate or heart-shaped leaves, but smaller than the other species, and when young they are marked with purplish lines and sometimes with faint silvery blotches. The stems are about 8 feet high, and arch over all at about the same level. It bears immense quantities of small white flowers on both sides of the stem, two little panicles above, and one below. It is a native of Japan.

Polygonum Sacchaliense, which has enormous leaves, and the highest stems from 12 to 14 feet in length, is, perhaps, not so well known. The male plant bears its flowers on upright racemes and in great profusion, while the flowers of the female plant, which is not so robust and vigorous, are borne on dependent clusters beneath the leaves. This is apparently the one which is usually described in books and catalogues, where the peculiarity of the flowering habit of the male plant is not mentioned, nor, indeed, have I seen

the latter in the Kew collection. It comes from that far-off island in the North Pacific (Sagalien) which Russia has lately annexed.

P. Amplexicaule is from the Himalayas; its leaves are much narrower, and its racemes of flowers larger than those of the other species, and it is of dwarfer habit. I have recently obtained a variegated species, which promises to be a very striking plant. Its leaves are richly striped, and mottled with yellow and green, and should it grow as luxuriantly as the others will be well deserving of cultivation.

All these die down in the autumn, but before they do so are striking objects from the rich colour their leaves take on ere they drop, and as the larger ones occupy extensive spaces in the garden, they give greater masses of colour than any other deciduous plants.

But amongst the grandest-leaved deciduous plants the *Gunneras* take the first place; indeed, they are said to be the largest-leaved deciduous plants which we yet know, although I think the greatest superficial square feet of foliage is borne by the *Musa Ensete*; but, at any rate, the *Gunneras* run it very close, having often an expansion of leaf 6 feet by 5 feet. The gigantic foliage to some extent resembles that of the larger Rhubarbs, but is far stouter and rougher, and is borne on long, prickly, more or less solid stems.



GUNNERA SCABRA (THE SOUTH AMERICAN GUNNERA).

The inflorescence is very peculiar, and is carried on a separate, solid, fleshy stem 2 or 3 feet high and some 4 inches thick at the base. The inconspicuous flowers are reddish, and thickly stud the whole surface of the cone-shaped mass.

There are two kinds in cultivation—*G. Scabra* and *G. Manicata*; the former has the larger leaves. They demand particular treatment to insure success. A hole should be dug about 8 feet long, 4 feet wide, and as many deep, and if near the margin of a pond, the better. A lot of draining material should be thrown into the pit, and then it should be filled up with good loam, rotted leaves, and manure. If the growing plants are amply supplied with water, they quickly attain a great size, and in a year or two will fill the space allotted to them.

In late autumn their dying leaves should be laid over their great crown-like projecting heads, and the spaces filled in with dead leaves; but it is well not to cover them too thickly, as on one occasion I nearly lost a plant by covering it up too warmly with loose, half-dried farmyard manure as a protection from the frost.

The *Eremuri* should be included in the class of tender exotics, as although, like the *Gunneras*, they do not require to be taken up at the close of the summer, they die down completely, and even their long, lily-like leaves disappear as the autumn

sets in ; but their roots require to be covered up with a layer of dead leaves or dried fern.

They are a beautiful family of plants, and a group of their stately scapes (as the tall stems bearing the spikes of densely flowered heads are termed) attract immediate attention as you enter the garden in early summer, standing high above the foliage of lesser plants, and yielding a subtle perfume. They belong to the Order *Liliaceæ*, and are natives of the Asiatic Continent, Central Asia, Siberia, Turkestan, and the Himalayas.

They should be given a place where they can have as much sunshine as possible, and the pits should be filled with lasting soil, not heavy, but having a full supply of good organic matter ; for the plants are not easily removed, and cannot be treated like ordinary perennials. Their roots are long, fleshy cylinders spreading a few inches below the surface, and exceedingly brittle.

Of the several varieties, *E. Robustus* is one of the grandest, its gigantic flowering stalk running from 7 to 10 feet in height, with the last 2 or 3 feet covered with flowers, pink in colour. Its leaves are from 3 to 4 feet in length, and 4 inches broad, radiating from the base of the flower stem.

E. Himalaicus resembles it in general aspect, but its flowers are white, with a slight rosy tint.

E. Turkestanicus has a scape less tall than the

others, and its flowers are reddish, and *E. Olga* is said to be one of the best, with beautiful white flowers, but I have not yet secured it. Some of these varieties have been imported into Europe for the past fifteen years, yet are very infrequently met with in gardens, perhaps because they are not generally mentioned in florists' lists, but as denizens of the subtropical wild garden they are much to be recommended.

And last, but not least, come the Tree Ferns, which consort so well with large-foliaged plants and with the general aspect of the subtropical garden.

Alsophila Excelsa is a Tree Fern from Norfolk Island, and is the one I have planted out for the last few summers, and under the shade of a Mountain Ash it has done well, spreading its huge fronds on every side, and exhibiting their graceful arches and beautifully divided leaves in a very artistic and satisfying manner.

The charming writer, the author of 'The English Flower Garden,' rather deprecates the planting out of tender exotics, and thinks that the garden 'should be adorned for the most part with plants that will brave our climate.' But though I agree so largely with his general teaching, I think that no one who has seen the effects gained by the addition of the tropical element to the wild garden would be willing to forego them on account of the

trouble occasioned by their removal and replanting, and least of all from any sense of incongruity. I have gradually increased the number of tender exotics, with an ever-increasing desire to add more.

And although, perhaps, there are comparatively few gardens that have the necessary protection from wind which these demand, if they are to put forth their tender foliage to perfection, yet the choice of the hardier ones amongst them will afford a possibility of enriching almost any garden that has the 'wild' element preponderating.

VII

A PASSING CONVERSATION—CONTINUED

UNDER the shadow of the big Pine, backed by the cool greenery of the laurels, is just the place this sultry afternoon to inhale the fumes of peace-giving Nicotine, and the Professor and I felt that we had the advantage over the non-smoking Padre. We might not have been inclined to talk but that the mind of the Padre, not being soothed by the insinuating drug, was more actively influenced, and he said :

‘It is not clear to me how your materialistic theory of thought, founded on vibratory impressions, carried up through a series of cell centres to a presiding centre, which is only a larger mass of cells, allows room for the conception of a sense of religion, or indeed of anything which may include a deep conviction or belief.’

‘My dear young friend,’ replied the Professor, ‘your sense of a deep conviction is based, like all other mental action, on the function of memory, and has arisen from induction, a method of

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thought, and emotion, another method of thought, but founded on an altogether different exercise of the double mental nature produced by brain function.'

PADRE. 'Double mental nature of brain function! What is that?'

PROFESSOR. 'I mean that there are two separate and distinct functions of brain activity, the intellectual and the emotional—the one which, when developed, raises us above the level of the rest of the animal creation, and endows us with the God-like power of searching into and of understanding the laws by which the Creator has evolved and still governs the universe, or of the laws of this world, which is but a fraction of it, yet a demonstrating fraction; and the other, which is hardly more than an organic function, shared by all the higher orders of animal existence, and connecting us with such lower forms of organic life, and therefore perhaps holding a lower place in cerebral function; and it is strange that this separation of the two functions has been instinctively recognised in all periods of civilized history.'

PADRE. 'In what manner has it been recognised?'

PROFESSOR. 'By the fact that the various races of mankind have always attributed intellectuality to the brain, while they have relegated the emotions to all the various organs of the body, to the heart especially. Do we not even now speak of the emotions

of the heart—heart-felt gratitude, a heart full of love, of despair, a good-hearted man, a heart full of wickedness? whereas we know that the heart is only a hollow muscular organ; and we read also of bowels of mercies and compassion, of bowels yearning in affection, of a “fit of the spleen,” as say the French; and the Mussulman, when he wishes to convey the idea of deep emotional feeling, declares that “his liver melted within him.” You see, therefore, that not only have the double mental actions been recognised as distinct, but that they have been vulgarly attributed to different portions of the body.’

PADRE. ‘Ah! but you surely would not assign a degraded position to the emotional side of human nature?’

PROFESSOR. ‘Yes and no. I have attributed to the intellectual side of cerebral function the highest civilizing influence, and I would further insist that all the great advances in the material prosperity of this era of the world’s history are due to purely intellectual effort; but, on the other hand, a man endowed with a purely intellectual brain would be a sad instance of onesidedness; for although he might be free from the degrading and tormenting passions of fear, covetousness, envy, hatred, and all uncharitableness, he would be wanting in the highest attribute of the emotional side of the brain—that of love, and all that is

included in that Divine and comprehensive entity, the one great crowning summit of emotional life, the one that brings us nearest to the Divine nature itself, without which no true happiness—nothing which can be dignified by the name of happiness—can exist, the one great emotional function that makes existence bearable, and the one which will surely be the all-predominant emotion in the life that is to come.’

PADRE. ‘For once, at least, I agree with you. Human thought, acknowledging this great truth, is but in unison with the Bible teaching that God Himself is love.’

PROFESSOR. ‘Ah! but the teaching of the New Testament only. Let me say, then, that religious thought is chiefly, though not wholly, a function of the emotional side of the brain, and thereby has arisen the dangers that have beset religious thought from the beginning, because the emotional side is less easily governed by the presiding and governing centre of the will than the intellectual side;* and you have doubtless heard that deeply significant and most true assertion of a Canon of your Church that “no religion can be lasting that does not commend itself to the intellectual side of human thought.”’

PADRE. ‘Possibly so; but what are called Broad

* See note ‘On the Loss of Control by the Will over the Emotional System’ at end of this book.

Church principles do not commend themselves to me, a humble disciple of the wider section of the Church, which holds a different view.'

PROFESSOR. 'Just so. There is, I know, a section of the Church which arrogates to itself an infallibility by virtue of which it pretends that no other followers of Christianity, who are outside the pale, have a right to be called a Church at all. Yet I believe that the conscience of England as a nation is in the keeping of the Dissenting Churches of the land. Happily, their adherents number a sufficient total to prevent any dangerous propagation of religious ideas which belong to a medieval period of the world's history.'

CURATOR. 'Even though a member of the Church by law established (which you, Professor, are not), I think that good comes of opposition in thought. Neither the fuller results of Parliamentary life nor the outcome of truth in any sphere can be accomplished without an opposition.'

PROFESSOR (*ignoring my intervention*). 'I am of opinion that every form of religious belief that has dawned on mankind, expounded by a Zoroaster, a Buddha, an Abraham, a Moses, or a Mohammed, has had a Divine origin, and that the Creator "has not left Himself without a witness" since the commencement of the world's historic period.'

PADRE. 'How can you couple Moses and Mohammed, or how can you see any true religions

in the teaching of such idolatrous nations as Buddhists or Brahmanists ?’

PROFESSOR. ‘Just so.’ (A somewhat irritant and supercilious expression, dear Professor, which insinuates that, of course, that is just what you might expect from such an opponent, and which I can see that the Padre resents.) ‘You merely represent an opinion held by a Church so infinitely superior.’

PADRE. ‘Superior, certainly, in its faith and teaching to such impostors as the men you specify.’

PROFESSOR. ‘And yet they one and all in the midst of a people buried in the grossest idolatry taught the faith of the one true God, the living Father of all, in opposition to the belief in many gods endued with all the passions of mankind. Zoroaster, “that great and deep thinker,” as he was termed, taught it in its purity, and strove to bring the people under the light of the true faith. “You cannot be the worshippers of the one true God and of many gods at the same time,” cried he. “Perform the commandments of Mazda, for they are the fountain of happiness.” Buddha taught the same great truths, and, further, that self-renunciation and universal love were the only modes of acceptance with the Divine Author of love, into whose presence the assimilation of this faith and its active exercise could alone insure

admission. And Mohammed, amidst a people enshrouded in mystic beliefs and the essence of idolatry, taught the faith in the one true God. You think that a Christian has the monopoly of piety—an emotional application of belief, by the way—yet Christians are far behind the Mohammedan or the Hindoo in religious fervour; for with the latter religion is carried into the daily and social life—indeed, it is one and indissoluble with the social life, so closely interwoven are their domestic with their religious laws and observances, while the grand and marvellously ornamental temples of India, which have cost vast sums, especially those of Southern India, which are of immense size and magnificence, show the depth of the religious feeling of the people.’

CURATOR (*quoting from Arnold*) :

“Children of men, the unseen power, whose eye
For ever doth accompany mankind,
Hath looked on no religion scornfully
That man did ever find.

“Which has not taught weak wills how much they can,
Which has not fallen on the dry heart like rain,
Which has not taught the sunk, self-weary man
Thou must be born again.”

But have we not drifted a little too deeply into religious discussion, a form of thought that is apt to raise emotional disturbance, and tends to stress of diction and feeling ?’

PROFESSOR. 'It is a strange fact that the emotional side of the brain is especially open to sensuous influences, yet perhaps not strange, but, at any rate, a fact. The sense of beauty, which is founded on so many senses, with its capricious standards; the sense of smell, with the delicious appreciation of scents and fragrance; the sense of sight, which enables us to appraise all the charms of form and outline and colour; the sense of hearing, that gives us the highest exaltation of the faculties by the sounds and rhythmic beauty of music; even the sense of taste, that recalls many pleasant remembrances; and of touch, that stirs the memory in many of its various phases—all find an easy entrance to the emotional side, and, indeed, build up many of its beliefs and at the same time lay it open to many weaknesses. And the priest has ever employed the sensuous feelings, not unknowingly, to impress the minds of the devotees: the emotions generally in heart-stirring eloquence, the eye in gorgeous ritual, the ear in delusive music, and now he would add the nose in the fragrance of incense. He has only to drag in taste and touch to complete the fascination.' (The Professor evidently *would* return to the polemical side of the discussion. It clearly was time to start another theme of conversation.)

CURATOR. 'I saw the mention a day or two ago

in the daily papers of a curious case of loss of memory in a gentleman who left his house for a morning ramble in Whitehall, and who was obliged to apply to a constable for guidance, but could give no account of himself, neither his address nor that of any friend, although he was a resident of London. He had forgotten why he was there, and even his own name, and he was then wisely removed to Charing Cross Hospital, where he remained for some days until inquiries were made for a missing man by one who had the name, address, and description taken down, and when the patient was shown the name, he suddenly remembered that it was his own.'

PROFESSOR. 'As I have said before, the loss of memory—that is, the power of handing up to the sensorium recorded impressions—may be due to any cause, functional or traumatic—that is, direct mechanical injury. The case you have mentioned must have been due to functional fault, some suppression of blood-supply to the appreciative centre probably, and consequently temporary in its nature, but it is interesting to observe that the way to the sensorium through the optic centre had not been blocked, and when he read the name he recognised it. But not long since a case due to traumatic injury was received into St. Vincent's Hospital, in Boston, which produced loss of memory of a peculiar kind. The man—Larsen,

a Norwegian—had received a crushing blow on the right side of the head by a falling block, which was so severe that it was expected to prove fatal ; but two days after the removal of the indriven bone and of all pressure on the brain he recovered consciousness, and although understanding what was said to him, could only reply in an unintelligible gibberish. After a few days his speech became coherent, when it was found that he could no longer speak in his mother-tongue, but only in English, in which he conversed more or less fluently. The control over the emotional side of the brain, as is usually the case in severe brain injury, was, however, almost completely lost, and he was thrown into hysteric laughter by a smile on the face of his interrogator, or a flood of tears if his friend looked glum.'

CURATOR. 'Another remarkable instance was recorded in the medical journals a year or two ago, in which an engine-driver on the Great Western Railway, by the sudden movement of the engine, was thrown forward when in the act of oiling some part of the mechanism, and the long spout of the oil-can was driven through his face into the base of the brain. He was taken to hospital insensible, but some days after became conscious, and then was found to be unable to recognise any of his friends who surrounded his bed. He neither knew wife nor children, and a

little later showed that he had lost all memory of events for the past twenty years, and believed himself to be an agricultural labourer, which he had been before entering the railway service. Some few months afterwards he had regained memory up to fifteen years before, but since that time all was blank. As he gradually recovered, the period of blankness slowly diminished, until he could recall his marriage and recognise his wife; and the last report stated that the memory had returned up to the period of three months before the occurrence of his accident.'

PROFESSOR. 'A good example of the gradual repair of cerebral tissue—the junction again of broken strands connecting the receptive centres with the perceptive and the still higher ones. Are not these proofs afforded by Nature herself of the materiality of thought?'

PADRE. 'I do not feel capable of judging. There may still be some other explanation of the phenomena, and I should like to ask what the metaphysician who expounds the theory of thought would say.'

PROFESSOR. 'If "the proper study of mankind is man," surely the intellectual faculties of mankind demand the deepest and most strenuous analysis, and I am convinced that the line of discovery of their mechanism lies, not in the ratiocination of the metaphysician, but in the

discerning unravelling of the intricate fibres of the brain by the aid of the highest powers of the microscope ; and already much has been done, and in the important discovery of Flechsig of the "association centres" of the brain, and yet more by the labours of Lugaro and his demonstration of connecting filaments between the gray cell elements, and of the expanding and contracting gemmules of the dendritic processes of the neurons in the cortical layer——'

PADRE. 'Oh, pray stop ! You would reduce us to a belief in the utter materiality of our loves and fears, and that all the highest attributes of our nature would be but the product of cell-life. As for me, I decline to entertain any such idea, and would fall back on the view held by the poet rather than on the disquisition of the anatomist :

' "The flowers of life and of love's wilderness,
Sweet idle blossoms of untamed will,
Make this dear many-sided world of stress
A vale of pleasaunce still.

' "You with your bloodless, never-ending mind
Grasp its delights so rich and desperate
Within a timeless vacancy, and grind
Its love as small as hate.

' "Leave me, my love, with all its dripping tears ;
It is not cold, like your so easy thought :
This is a world of life and sins and fears,
And with warm blood was bought.

“Leave me, my love, and leave me that sweet faith
That moves my being like an early spring :
These are enough to lead me out through death
Beyond this earthly thing.”

I had expected to see some chagrin exhibited by the worthy Professor at being ‘shut up’ by the outraged nervous tension of the Padre, but there was a twinkle in his eyes and a stray suspicion of a smile on his lips (so far as his beard permitted them to be seen) that led me to think that, after all, he was really quizzing the Padre.

VIII

THE HARDIER EXOTICS

I THINK that first amongst the hardier exotics, where tropical effects are desired, should come the hardy Palms. Unsupported by other tropical forms, the Palm has so foreign an aspect that it may seem almost out of place in an ordinary garden, but it has a potent congruity and reasonableness in one that affords the largeness and richness of foliage which are yielded by the forms of plant-life we have considered under the head of tender exotics.

In the gardens of the Riviera, associated with masses of Bamboos, the Palms are thoroughly at home, and as luxuriant as those in the islands of tropic seas, and no one would imagine them to be strangers and pilgrims. And although on the esplanades by the seashore, as at Cannes and Nice, they are somewhat wind-beaten, in the more protected gardens they flourish luxuriantly.

But we cannot in the English climate attempt to grow the grander examples that we find there,

and are almost entirely confined to the one genus the *Chamærops*. These, however, in a few English gardens have attained a growth of many feet, but they have taken many years to do so.

Three years ago I planted out *Chamærops Fortunei*, and it has begun to expand its foliage in a very satisfactory manner. But we have had three mild winters, and what a severe one would do is still to be seen. I protect it as much as I can by wrapping dried bracken round its stem and placing some on its head. Its fronds of the past year are three times the size of those still remaining green which it had when first planted out; but its stem is now only about 2 feet in height, yet making perceptible growth, and I am looking forward to the time when it may emulate in height the stems of the lordly *Musas*, which are its companions. This year I also planted out *C. excelsa* and *C. humilis*. The first is so nearly like *C. Fortunei* that it is difficult to decide between them, but *C. humilis* is altogether different. The segments of its fronds are much narrower, and young ones are thrown out from its base, and the leaf-stalks are armed with spines. It certainly is not so handsome a plant as either of the others. When in the Riviera this spring I saw a most beautiful Palm which, I think, had recently been imported. It was growing in the gardens at Bordighera, and had a most striking appearance, its

leaves being of light bluish-green, in some lights a blue gray, almost white. The largest was only 3 or 4 feet in height, but its fronds spread widely, and its unusual colour made a spot of beauty amidst the dark green of other Palms. It is named *Brahea Roezlii*. I also brought home a Palm which is marked in Nabonnand's (of Cannes) list as '*très rustique*,' and which, if it be 'very hardy,' will add another to those we may plant out. It is called *Cocus Australis*. The segments of its fronds are narrow, like those of *C. humilis*, but they arch over in a very graceful manner, giving a quite distinctive character to the plant.

Amongst the large evergreen foliage plants which are to be recommended for the wild garden is the *Phormium tenax* from New Zealand. It does not flower in England, but in the gardens of the Riviera it bears long spikes of lemon-coloured flowers, and is so far more ornamental, yet in large clumps it is of value here. It has long leathery leaves about 5 feet in length, exceedingly tough and strong, and consorts well with *Yuccas*. In less protected gardens it may be placed out in summer, and used for the decoration of the house in winter. In this place, however, it is hardy. It likes loose rich soil and plenty of water.

The *Yuccas* are well known in many gardens, but are particularly suited to the wild garden, and are thoroughly hardy. The larger ones are good



CHAMÆROPS FORTUNEI (THE HARDY PALM).

objects if planted singly, but the others should be grouped in masses, and especially in rough places, and thus one or more of the groups will yield tall flowering spikes every year, which, when crowded with their lily-like bells, have a noble aspect. There are a good many varieties, but the *Y. filamentosa* flowers the most freely. These may be raised from seed, and when so obtained there may be variety in the shape and set of the flowers. The flowers are usually pendant, but in one that flowered last year, each flower on the tall spike opened like a star, and faced outward on all sides, which gave it a very handsome appearance.

Yucca gloriosa is larger and more imposing, but it takes several years to produce its flowering stem. When, however, it does this, it far exceeds the former in size and beauty, the stalk being nearly 7 feet high, and its flowers large, white, and scented.

The *Agaves* are very characteristic objects in the Riviera, and grow to an immense size; their large, fleshy leaves, armed with spines on the edges, are often seen 4 or 5 feet in length and 4 inches thick at the base. The species seem to be *Agave Americana* and *A. Mexicana*. They can only be trusted in the open air in England during the summer, and should be located in rocky places, as they prefer drought to moisture. They may be raised from seed, and if kept for some

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months in the hothouse after being pricked off they grow very rapidly, but they need this stimulus at first.

The *Agapanthus* from Africa is another of the group of long-leaved plants, and belongs to the order *Liliaceæ*. It is almost always treated as a denizen of the greenhouse, but with me thrives in the open garden, especially if placed in damp soil, although in hard winters it should be protected with ashes or dead leaves. It is one of those plants which, I think, gain much in beauty when viewed with natural surroundings rather than when imprisoned in a pot; and although it may flower later in the open air, it thus becomes a well-appreciated addition to the autumn flowers. There are two varieties here—*Agapanthus umbellatus*, with umbels of blue flowers on stalks 3 or 4 feet high, and *A. umbellatus candidus*, with white flowers—but I believe that there are several others obtainable. When grown in pots, its thick, fleshy roots will sooner or later burst them, evidencing its unwillingness to be so restrained. In sharp winters its leaves die down, but with a little care its roots are uninjured.

There are two plants with large peltate—*i.e.*, shield-shaped leaves—which are very ornamental, and which both love water, and both belong to the Saxifrage family.

The first is *Rodgersia podophylla*, which has not

flowered with me, but this is of little moment, as the flowers are inconspicuous, and it owes its beauty to its leaves. These are about a foot wide, somewhat divided, and are richly coloured with a bronzy-red in summer; in winter they die down. It is a native of Japan.

The other is a true Saxifrage—*S. peltata*. Its leaves are perhaps rather larger than the *Rodgersia*, borne on stalks about 3 feet high, and a year or two after planting, if the soil be rich and damp, it forms a conspicuous and handsome mass of foliage. It flowers in the spring, sending up stems 1 or 2 feet high before the leaves appear, and bearing clusters of pale pink flowers. There are many other Saxifrages to be found in gardens, for the family is a very large one, but generally they are too well known to need description, and it is my aim to bring into notice those plants chiefly which I have found suited to the wild garden. I may, however, mention that very old garden plant, *S. crassifolia*, whose broad, dark-green leaves and panicles of reddish flowers fit it for rough places, and it is further useful, as it seems to put up with any amount of shade.

Very conspicuous plants in my garden are the Day Lilies, and they are strongly to be recommended for like places. In order to obtain the best results they should have moist soil, for if they do not get this they are dwarfed and poor.

There are many varieties, from the *Hemerocallis Dumorti* and *H. flava*, which flower in the early summer, or even in the spring, to the double-flowered *H. disticha fl. pl.*, which yields its splendid inflorescence at the beginning of autumn, and they vary in colour from a pale lemon-yellow, through fleshy reds and copper colours, to a combination of all these. Their foliage, too, varies greatly, from the thin, narrow, almost grassy-leaved *H. graminea* to the long, bold leaves of the later flowering species. There is one also, *H. Kwanso*, whose leaves are striped with white, and in a mass this is very effective.

They are easily multiplied by division of their roots, so that, with a few of each species selected, in a year or two an ample number may be obtained. They are termed Day Lilies from the fact that each one of the blossoms lasts only a day or two ; but this is really no drawback, as there is always a long succession of buds ready to take the places of the spent flowers. The flower-stems vary in height from 1 foot in the smaller species to 3 or 4 feet in the larger, while the size of the blossoms ranges from 1 to 5 inches in diameter.

The ordinary Lilies are fit occupants both of the set-out garden and the wild garden, and in both are alike beautiful and appropriate, but there are three or four out of the many varieties which I think particularly suitable to the wild garden.

These are: *Lilium speciosum*, *L. Auratum*, *L. giganteum*, and the bog lilies, *L. pardalinum* and *L. superbum*.

The first thrives well, as do they all, in the open air, but it needs shade and moisture, and with these no lily is more beautiful, though there are grander ones. Its delicate shades and markings of rosy red and pink, or the pure white just delicately tinted, or the deeper red, are all alike fascinating. *Lilium auratum* is perhaps handsomer, with its tall stems, from 4 to 6 feet, and its grand white flower-tubes, streaked and spotted with yellow or richest red. It, too, likes a certain amount of shade, and then will continue yielding its splendid flowers well into the autumn. A group in this garden, each with a crown of some fifteen or more blossoms, was still opening them until cut by frost in the middle of October. It should be planted deep—*i.e.*, at least 1 foot underground—that its bulbs may be well out of the reach of frost, and that the moisture it loves may be obtainable.

But undoubtedly the grandest of all is the *L. giganteum*. I have already described its charms. Magnificent in height, in the stately spike of unequalled flowers and in its huge leaves, no other species of this lovely order can approach it. The only drawback is the fact that it takes several years to flower, and then it dies; and

although it gives off young bulbs, these in turn may not blossom for five or six years. Still, it is a magnificent addition to the wild garden, where, as no doubt the reader will have observed, I advocate the planting of great, foliaged plants or tall, flowering ones. Not that the lesser ones need be necessarily omitted, but that the tropical effect—so characteristic and, because not generally obtained, so striking—can hardly be secured without the former.

The Bog Lilies will indeed exist without bog, but they obtain their best results in boggy or peaty soil, where they grow 6 or 7 feet, and should be associated with the bog-loving Irises from Japan.

All Irises are beautiful, but surely there are no more beautiful flowers than these, the Japanese varieties. We owe very many, indeed, of the charms of our gardens to this 'Flowery Land,' whose inhabitants are endowed with a love of the beautiful and the artistic above all countries, so that whenever we are struck with admiration either of shrubs or flowers, they are generally found to have been yielded by Japan. It is not only that the climate of Japan resembles in many respects our own, and that therefore their plants may become ours, but their intrinsic love of the beautiful has induced them to cultivate the finest forms.

The Japanese Irises are included in the group

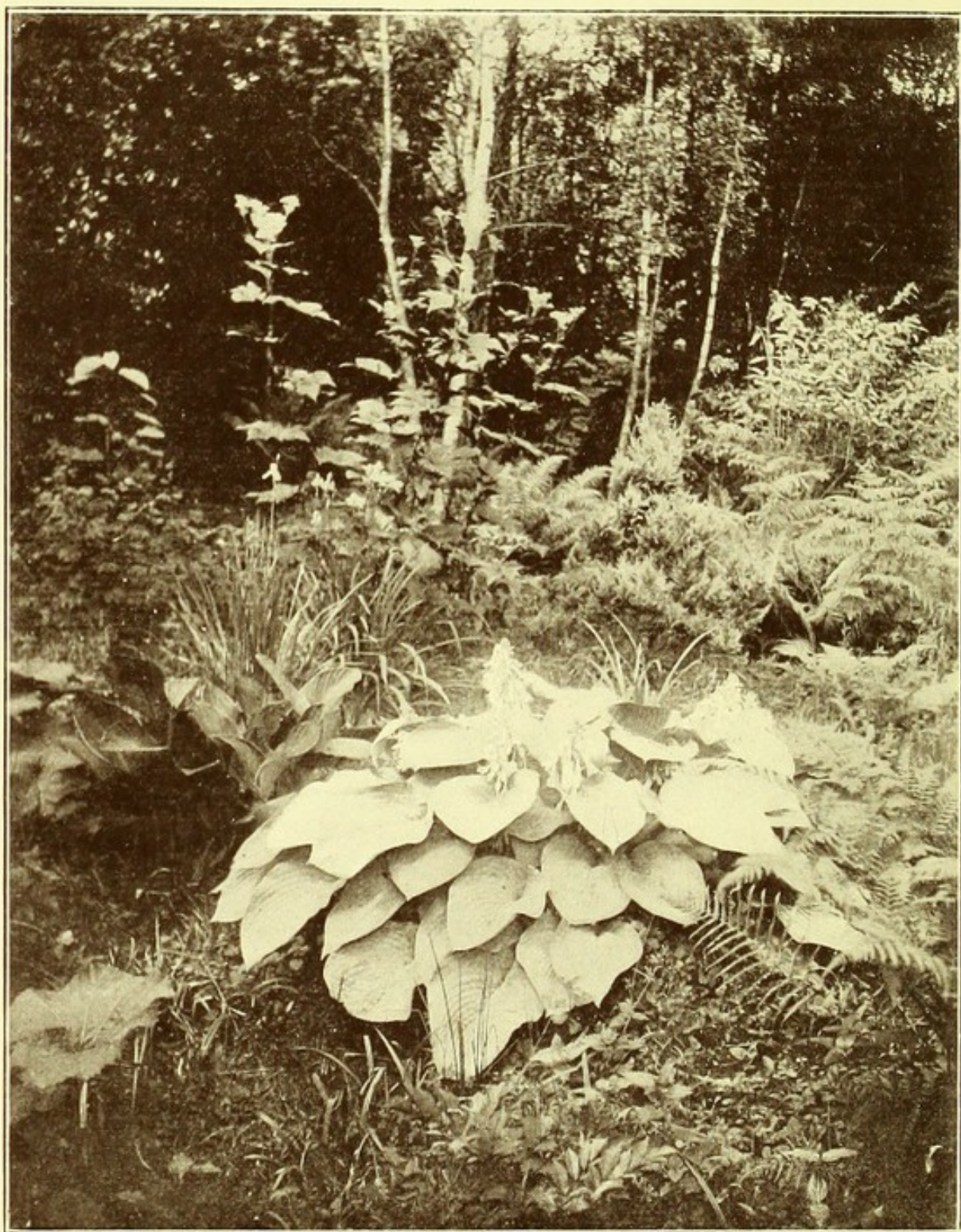
named *Iris Kæmpferi*, and of these there are a vast variety, of different shades of colour and different forms of flowers, and some of the colours are rare in flowers; brown, maroon, indigo blue, and their shades and mixtures, are frequently met with, as well as the more usual blues, violets, and whites, but it is the rarer colours that distinguish the group.

Of the many other kinds of non-bulbous Irises I need hardly point out, as they are known in every garden where the beautiful is to be looked for; but there are one or two I would note, which, however, are not exotics. *Iris pseudacorus*, the common Water Flag, is of much value where there are ponds. It grows freely in the water, and, indeed, if planted on the bank, it finds its own way into the water, and when in masses, topped by the large blooms, it is of decided value. I planted only one or two at first by the sides of the ponds, but they spread so largely that they have now occupied all the space that I can afford them, and there is a struggle for mastery between them and the Bulrush (*Scirpus lacustris*), which, with its long rhizomes running through the mud, has somewhat the best of it. But, artistically speaking, the combination is a good one, their general forms agree, and when the flowers of the yellow Iris are over, the tall stems and massive brown heads of the Bulrush complete the picture as autumn comes on.

There are three other Irises which especially like damp soil, or even mud—*Iris longipetala* from California ; *I. ochroleuca*, also called *gigantea* from its great size ; and the comparatively little *I. Sibirica*. The last is a charming plant, with narrow, grass-like leaves and many flowers, blue with white veinings, and it is one of the earliest to flower, and of the hardiest, not having a tendency to die out as so many of them have.

The common German Iris (*I. Germanica*), so often found in cottagers' gardens, is useful for rough places, and with good soil makes very satisfactory clumps. There is one Iris which I have not succeeded in cultivating, but it is one of the handsomest. It is the Mourning Iris (*I. Susiana*), with its magnificent blossoms of the darkest possible hues—a basis of the deepest gray, spotted and veined with purplish black. I saw it at Kew, not without some envy, thriving in a massive clump. It requires, I know, thorough drainage and a warm soil, and it is this perhaps which I have not succeeded in giving it, as so much of my garden is damp.

I have made considerable use of the Funkias, and, indeed, they are so adaptable, caring nothing for shade, however deep, or the sunniest of exposures, liking, it is true, moisture, but putting up with drought, not being injured by frost and the hardest winter our climate affords, and thriving



FUNKIA SIEBOLDI (THE GREAT FUNKIA).

equally well with dry summers as with wet, that one can put them in any position in the garden, where large foliaged plants are needed, with no anxiety as to possible failure.

And the size and shape and colour of their leaves varies through so wide a limit, that there is room for choice in selecting a suitable site.

Funkia Sieboldi is perhaps the finest variety. It has large, somewhat heart-shaped leaves, about a foot wide, of rich green colour, shot with a bluish tint, that in some lights is very conspicuous. These are borne on long leaf-stalks, the outer ones bending over, and the whole, when well established, forming a very handsome clump. Above or amongst the leaves rise a great number of flower-stalks, which bear on one side a series of bell-shaped flowers of creamy white, tinged with colour.

F. grandiflora has pure white flowers, somewhat larger than the first named; and in the various other varieties the flowers are more or less tinged with blue, and are not so well developed; but they yield leaves of many shapes—ovate, heart-shaped, or long and narrow—and several species are well variegated, white margined or splashed, or with yellow edges. These are named *F. ovata*, *F. subcordata*, *F. lancifolia*, with subnames indicating the variation. I believe that we owe all these, like many other floral treasures, to Japan.

Eulalia Japonica (variety *zebrina*) deserves per-

haps an earlier place in the list of hardy exotics, as it certainly forms a more conspicuous object in the wild garden than some of those which we have lately considered. It has somewhat the habit of the Pampas Grass, but makes a far more imposing picture, rising to a height of 6 or 7 feet, and arching over on all sides in a dense mass of foliage, the clump in a few years attaining several feet in thickness. It dies down every winter, and the strong stems should then be cut down to within a foot or two of the ground; and when the spring comes, and the young green shoots appear, they should be further cut back to within a few inches of their bases. I recommend the leaving of the greater lengths of stems through the winter as a protection against frost, for, although with me they have never suffered, I have understood that in more exposed situations they have been injured by a severe winter.

As the young shoots grow and develop into their full height, the green leaves become barred with yellow, and this variegation adds much to the beauty of the plant. Its flower-heads are borne in stems rising above the rest of the foliage, and when fully opened are beautiful, being tinged with brownish-violet colour; but unfortunately they come so late in the year that they are usually battered with wind and rain and benumbed with cold. Only in one year did their flowers open

with me, and it is better to cut them and allow the soft plumes to open in a warm room, where they associate well with cut Pampas Grass, and present a contrast of colour.

There is another variety of *Eulalia*, which has white stripes along its leaves and which forms a good pot plant, but I cannot recommend its being planted out, as it is too fragile, and not hardy and vigorous enough for the garden.

The Pampas Grass (*Gynerium argenteum*) is too well known to need any description. There are several varieties. Some have such fragile flower-stems that they get knocked over by the first blast of wind and rain; but I have one, whose specific name I do not know, which, from bearing lighter plumes on thicker stalks, lasts well into the winter. I have attempted to grow the more delicate variety with rosy-coloured plumes, but it proved one of my failures, and I did not repeat the experiment; nevertheless, I intend to obtain the variety named *G. jubatum*, which differs so much from the commoner ones that it deserves a trial. It is said to have 'immense loose panicles of long filamentous, silvery flowers, of a rosy tint with silvery sheen,' which surely is a sufficiently charming description to induce any lover of the garden to wish for it.

Closely allied in aspect to the Pampas Grass is the *Arundo conspicua* from New Zealand; indeed, so much does it resemble the former that most

visitors suppose it to be the same, yet it is quite a different plant, coming from a different quarter of the globe, and belonging to a different genus. It has the great advantage over the Pampas Grass of sending up its tall flowering stems, from 10 to 12 feet high, in the early summer; and the inflorescence, which is a good white, is attached to one side of the head of the stem, hanging over most gracefully; and this lasts well into the autumn, when the Pampas Grass is only commencing to flower. It is thus of more value as a flowering plant, while its leaves are even more ornamental than those of the former. It is to some degree more tender, and requires some protection in severe winters. I lost one good clump in the last very hard one. But it is worthy of some care.

There is another Arundo, *A. Donax versicolor*, which is a very handsome plant, and well worthy a place in the wild garden. Its leaves are long and much broader than those of its congener, and boldly striped with white. They rise to a height of 5 or 6 feet if in a sheltered position and good damp soil. I have seen the unstriped variety growing in the ditches of a garden in the Riviera to a height of 15 feet.

The Arundo does not, so far as I know, flower in England, but as a foliage plant it is of much value. I usually take it up in the late autumn, as I have lost one or two by leaving them out.

The Spireas are amongst the most conspicuous plants of my garden, and in summer yield masses of colour. They may be divided into the herbaceous and the shrubby sections. Both contain many varieties, which are being annually added to. Two of the former are British—the well-known *Spirea ulmaria*, the Meadow Sweet of our ditches—because, like all Spireas, it likes damp soil—and which, though found in lowly spots, is not the less charming; and the *S. filipendula*, a lowly but very pretty little plant, with fern-like leaves and clusters of yellowish white flowers, one of the smallest of all the Spireas.

The most beautiful and effective is the *S. palmata* from Japan, which country, as usual, has yielded the best forms. It should be placed in masses on the pond-banks or near water, where it may have room to increase, which it does rapidly, and then both in foliage and in flower it is lovely, and its rich crimson heads reflected in the water make a delightful picture. Its leaves are, as its name indicates, palmate, and each plant will form a mass some 3 or 4 feet high and almost as many broad, crowned with panicles of the richest coloured flowers. In June or July it constitutes some of the most brilliant colour masses which my garden affords. I first saw it as a pot flower, when its stunted growth and poor inflorescence gave me but a meagre picture of what it might be.

S. lobata, which the Americans call the 'Queen of the Prairie,' is another rose-coloured Spirea, but does not form the large clumps of the former species, and, indeed, is inclined to run and come up at a little distance. Its flower heads are much smaller and more sparse, and, though a pretty plant, it never equals the *S. palmata*. It is sometimes called *S. venusta* in catalogues. There are some coloured varieties of *S. salicifolia* which are of value, but I cannot speak of them from personal experience.

Amongst those which have white or cream-coloured flowers, *S. aruncus* is one of the tallest, and for that reason should be placed in the background. Its foliage is large and handsome, and its long panicles of flowers bend over gracefully, and in favourable situations the plant attains fine proportions.

S. astilboides is a comparatively late addition to our gardens, and a very valuable one. It is one that does well as a pot plant, but, of course, then never attains to the noble proportions of the free denizen of the garden. I prefer it clumped together in masses. Its flowers are of a soft cream colour and borne in spicate panicles; *i.e.*, each separate stemmule on the spike bears a finger-shaped bunch of flowerets, and, as they are arranged longer and compound below, and shorter and more single above, the whole spike is symmetrical. It comes

from Japan ; indeed, it seems to me that any plant more beautiful than another of its congeners may safely be referred to these happy islands.

But the species of *Spirea* are very many, and the lists contain a large variety, from which selection may be made. Here I have spoken of those I know best, but I may mention that there are some which have richly variegated leaves, chiefly varieties of *S. ulmaria*. Some of those I have are splashed with yellow and others with white, but, then, chiefly in linear markings.

Of the shrubby section there are many noble plants, and amongst the best is *S. Lindleyana* from the Himalayas. This is a grand shrub, with strong woody stems branching and reaching a height of 8 or 10 feet, terminating in long plumes, about 12 or 15 inches in length, of white flowers, which wave in the breeze. The foliage, too, is handsome. Like most of the shrubby *Spireas*, it, although liking rich, moist soil, grows well in moderately dry situations. It is easily multiplied by division.

S. aricæfolia should, I think, come next, and, when well grown, is as beautiful as the former. It is more bush-like, has good foliage and numberless flowers. Mine have grown to a height of 6 or 7 feet, and their many terminal points are hung with drooping, spray-like spikes of whitish flowers. When placed in a position where it is not crowded it forms a striking picture.

S. Bumalda, of which there seems to be several varieties, is more compact and carries clusters of flowers over the upper surface of the foliage. Some that I have bear red or rosy pink flowers and others pure white, and they flower twice in the year—in spring and in late summer; indeed, they are rarely without flowers. Those species included under the names of *Douglasi* and *Nobleana* are, I believe, much to be recommended.

Of the multitude of hardy plants usually found in gardens I need hardly speak, but amongst them there are two which suit well the wild garden and rough places. The first are the Golden Rods (*Solidago*), some varieties of which, from their height and size, are here well placed. They come from North America, and there are one or two to be recommended—*Solidago arbata*, *S. altissima*, and *S. Canadensis*.

The other is the *Rudbeckia*, also from North America. *R. Newmanni*, although not growing high, yields rich-coloured flowers of maroon and yellow, which, blooming in the autumn, when most others are over, is valuable on that account. A new species which I have lately acquired, *R. globosa*, attains a much greater height and bears double, yellow-coloured heads. Both are quite hardy.

Of the many flowering shrubs which especially suit the wild garden I shall write in a succeeding chapter.

IX

A WALK IN THE WOODS AND A NEW ARRIVAL

THERE was a pleasant wind from the west, with fleecy clouds overhead, which had tempered the usual heat and induced us to take a walk in the morning, and we bent our steps to the outskirts of the forest, and visited that picturesque spot in the umbrageous depths of the wood where the Romans of old, during their occupation of this part of the country of the Dobuni, as the tribe which occupied the valley of the Severn was called, had discovered certain veins of iron ore, and had worked them over a considerable space of forest-covered land.

The country people call the workings the Scowles, and, although long after the Romans had evacuated the country there had been discovered rich mines of iron ore, as well as of coal, the original workings of the Roman period had been left untouched, and grown over with great forest trees, and now yields a charming spot for picnics and morning rambles.

The Romans had used no shafts in their excavations, but had worked the superficial veins only, to a varying depth of from 30 to 60 feet. Doubtless the débris of centuries has raised the floor of the excavations and rounded off the contours of their margins; but the sides are still precipitous of the many narrow and elongated, more or less parallel, ravines which now remain.

These are overhung with trailing plants, long festoons of Ivy, Honeysuckle, and Bryony, while the crannies in the rock are filled with spreading and depending masses of ferns—the Hart's Tongue, the Lady Fern, the Polypodiums, and many others.

The intervening masses of rock between the long excavations are crowned with stately forest trees, Oak and Beech, which still hold a precarious footing and bend their wide boughs over the scarped sides, their massive roots, where exposed by the denudation of the rock, standing out like granite corbels designed to support the overhanging structure. This is a grand place for the artist and, to a less extent, for the photographer; but so much of the charm lies in colour of the ruddy rock, of the bosky depths, of the ever-varying glinting of the sunshine through the leafy boughs, of the changing hues of the semi-transparent leaves high overhead as the rays of light traverse them, of the many tints of the grasses and trailing plants overhanging the crests of the perpendicular

banks as the sunshine plays upon them, or of the richer hues of verdure in the shadowed hollows, which the photographer is unable to reproduce ; he can but bring away a feeble picture in monotone, and thus, compared to the artist, he lies under a great disadvantage.

As we emerged from the end of one of the deep recesses of the open trenches, and prepared to retrace our steps through the forest glades, halting for a moment to charge our memories with the delightful scene, I observed :

‘ It seems to me that the Romans were less practised miners than the ancient Greeks.’

‘ Why ?’ asked the Padre.

‘ Many years ago,’ I replied, ‘ I had an opportunity of visiting some mines which had been dug by one of the Greek tribes who had accompanied Alexander on his invasion of India, and who, like many others, had, on his return march, colonized a tract of country amidst the high mountains of what is now called Baluchistan. They discovered that the wild district was rich in mineral wealth, especially lead and antimony, and they had mined the deep sides of the mountains in a far more efficient manner than the Romans have mined here, although some five centuries later. We were travelling through this tract of country, and learned that there were deep excavations not far distant, which the present natives of the district

would not enter, as they believed them to be inhabited by ghouls and evil spirits. I was able to visit these mines, situated high up on the mountain-side, and found that they could be entered by inlets, which I discovered by the long moraines of stones, which had been thrown out of the mines, and formed a talus at its mouth. These inlets just allowed of entry in a stooping posture, and led into long galleries which, at certain points, opened up into caverns of great size and height, and out of these radiated other galleries still further into the heart of the mountain. I spent several hours working my way through these, carrying a candle in one hand and a revolver in the other, for it was not unlikely that I might meet face to face, in the low galleries, a ravenous animal of some sort. The sides of the tunnels and caverns glistened with the ores, and from what I could judge, the rock was rich in minerals.'

'Surely there is nothing new under the sun,' observed the Padre.

'The tin mines of Cornwall,' said the Professor, 'must have been worked not so very long after the period of the mines you speak of, for they supplied ancient Europe long before the coming of the Romans into Britain, and gold had been mined in Africa in the time of Solomon, a thousand years before Christ.'

‘But those mines may have been alluvial,’ I suggested.

‘Well, I don’t want to depreciate the skill of your ancient miners,’ said the Professor, ‘but is not luncheon time near at hand?’

As we came down through the hanging wood at the back of the house the sounds of wheels on the carriage-drive announced the arrival of somebody, and on reaching the gravelled terrace we found that the carriage had deposited its occupant at the hall-door, who proved to be a young fellow with frank blue eyes and curly hair, cropped, however, pretty short, whom we had known well and liked much before his departure to join his battery on active service in India. He usually went by the synonym of ‘the Gunner R.A.,’ and was evidently a welcome guest, judging by the warmth with which he was received by the feminine section of the household.

We were smoking a quiet pipe on the rustic seat in the wild garden that lovely afternoon, when one of us raised the question of the use of pain in the animal creation, and why it should have been permitted by a humane Creator.

‘Pain,’ said the Professor, ‘may be said to be a necessary result of the plan pursued in the constitution of the animal frame—a matter of course of evolution and of the laws which govern it.’

‘As you take it for granted,’ suggested the Padre.

‘As I take it from the principles of physiology,’ returned the Professor. ‘It was essential that the tissues should be endued with great sensibility, and that the amount of sensibility should be proportioned to the higher development of the creature; and the position of man in the scale of the animal world demanded from him a higher intelligence, founded on a more exquisite appreciative power of the nerve tissues, and this necessarily meant the tension of nerve molecular movement, which we call pain.’

‘But,’ said the Padre, ‘this suggests that the lower animals feel less pain on injury than man. But “the worm you tread on feels a pang as great as when a giant dies.”’

PROFESSOR. ‘A mere poetical fiction, the fallacy of which one would have concluded that your belief in the pity of the Creator would have demanded. But, as a matter of fact, I have seen a horse whose leg was fractured, and dangling to and fro as he walked, quietly browsing as if nothing had happened.’

PADRE. ‘Then such a plea would sanction the performance of that un-Christian practice of vivisection.’

PROFESSOR. ‘Vivisection! Is not that constantly practised in every hospital of the country

when a tumour which threatens a tormenting death is excised, or a limb fractured to a hopeless extent is amputated, and under the same conditions of insensibility as when an injury is inflicted on an animal in vivisection? Most certainly yes. And as for its un-Christianity, is not the essential doctrine of the Christian Church the sacrifice of one for the good of many?’

PADRE. ‘A specious argument.’

PROFESSOR. ‘Possibly specious to those who do not understand it, but feasible (which, however, perhaps may be taken as another rendering of “specious”) to those who do. Yet you should, at any rate, believe me when I say that pain in vivisection, as you understand it, is guarded against with as much care as the vivisection of a limb in amputation. But pain as a torment has been sanctioned and practised by a Church calling itself Christian.’

CURATOR (*with an attempt to ward off the theological element in the discussion*). ‘Pain is essential in the nature of things, yet it is alleviable, and amongst the discoveries of recent medicine is a drug which, without causing general insensibility, like opium or chloroform, is capable of paralyzing the centre which appreciates pain; and thus, although the pain may exist so long as the irritant cause is in action, it prevents by its local paralysis of the function of a gray centre in the brain, or by

impeding the passage of sensation along the spinal cord, the injury which pain inflicts. It is a product of chemical analysis or synthesis, but although we know its chemical composition, the mode in which it acts is as inscrutable as the action of any drug on the animal economy.'

PROFESSOR. 'Yes, and I believe that one of the next great discoveries in medicine—and possibly the greatest—will be to elucidate the mode of action on the tissues of the various remedies, organic and chemical.'

CURATOR. 'The progress of discovery in medicine is one of the most vital interest to mankind, and certainly it would seem that in this age of physical discovery and advance in knowledge medicine is keeping a fair place. There have been two which promise to be of the greatest moment—the discovery of the pathological microbe, and the part that it plays in the production of disease, and consequently of the way this knowledge opens out to counteract the spread of many diseases to which man is now a prey; and the discovery of the unsuspected influence which the secretions of certain glandular organs exercise in health and disease, and the power which their administration affords of healing bodily diseases which were so utterly beyond the reach of ordinary medical aid that their cure may well be likened to a miracle.'

PADRE. 'But what are these?'

CURATOR. 'Perhaps one of the most notable is the cure of that terrible affliction termed cretinism, in which the unfortunate sufferer was condemned to be degraded to a condition of life far below that of many of the happier brutes. Dwarfed in stature, misshapen in aspect, idiotic in mind, barely able to perform the most ordinary conditions of existence—a horror and a terror, yet who, under the influence of the administration of a certain extract of glandular structure, kept up for a considerable period, has evinced a development of body and mind which has transformed him into an intellectual and presentable being, has given him speech and intelligence, has set free the power of growth, has removed the bestial aspect and transformed the whole appearance, restoring him again to the love and affection of his fellows, and made him capable of the higher life.'

PADRE. 'This is indeed remarkable.'

PROFESSOR. 'But what a question this opens up of the part which that inner being you call the soul may play in human and extra human life! Yet perhaps a like question is inherent in the subject of the prevalence of crime in those we term the criminal classes, a wider and more common class than the cretin, yet which lies under the ban of a curse almost as great.'

PADRE. 'Our Church teaches that we are all

born in sin. I certainly accept the doctrine of original sin.'

PROFESSOR. 'Yes, indeed; this is the teaching of priestcraft. But how can you reconcile this idea with the supposition that the soul came from God and paradise? Pure, white, and unspotted it must have come, if it came at all, having no sex (for sex is an accident of the deflection of a contour line in a process of cell-proliferation in the germ) and no proclivities, yet destined to be placed under the influence of circumstances which may relegate its existence possibly to a spot in cannibal Central Africa, or to the slums of the east of London, or to the bosom of a Christian family, with all the inevitable results of its environment.'

CURATOR. 'Well, I hear the sound of the tea-gong. Surely the wind must have gone round to the north. Come, let us make the better acquaintance of the Gunner.'

The pit-pat of the tennis balls saluted us as we reached the lawn and looked over the terrace to the tennis-court below, where the Gunner and the daughter of the house were just finishing their game, and, soon after, ruddy with health and exercise, climbed up the flight of steps to our higher level.

The evenings had shortened, and had lost some of the balmy softness which we had so long

enjoyed; and after dinner the Professor and I, under the protection of great-coats, sat smoking in the quiet twilight, which would be fast deepening into dark but for the light of a nearly full moon, which covered the bosom of the river with a sheet of brilliance, framed in the indistinct haze of the distance and the darker shadows of the nearer woods, charming one inlet to the mind with a sense of beauty, and only wanting the adjunct through another sense of the kindred one of melody to perfect the sensation, and which was soon supplied by the soft tones of music coming through the open doors of the drawing-room windows, and the rich voice of the Padre accompanying it, giving the words of that delightful song of Gerald Massey's:

‘O lay thy hand in mine, dear ;
We’re growing old, we’re growing old ;
But time hath brought no sign, dear,
That hearts grow cold, that hearts grow cold.

‘’Tis long—long since our new love
Made life divine, made life divine ;
But age enricheth true love
Like noble wine, like noble wine.’

‘Truly,’ said the Professor, ‘I must do the Padre the justice of not accrediting the monopoly of this divine function of the nervous system to those of his own age alone.’

X

SOME FLOWERING SHRUBS, ETC.

THERE are many flowering shrubs, all having their own peculiar claims to beauty and fitness, either of foliage or flower. But they vary much in size and habit, in retaining or losing their leaves in winter, and in the conspicuousness or otherwise of their flowers. Some make exceedingly good background objects, and others are of value singly, and some merit a distinguished place. In laying out the garden it is well to know their chief points, in order to adapt the site to the requirements of each.

Where in the background evergreen shrubs are needed as a protection against wind, the commoner forms of evergreen, Laurel and Rhododendron, may be employed with advantage, until the best of the protecting trees have acquired a sufficient size.

There is a form of Laurel with very large, glossy leaves, quite double the size of those of the common kind, and it is a fast grower, and very vigorous. I obtained it under the name of the

Magnolia-leaved Laurel, and if the Laurel is ever allowed to come into prominence, which should be very rarely, this form should be the one selected. In this part of the West of England the Laurel is a rampant grower, and requires to be cut back and cleared away every year or two. It spreads widely by the lower branches, rooting where they touch the ground; but in the North of England it is, I believe, treated almost as an exotic.

The common Rhododendron, as distinguished from the hybrid forms, also grows here very rapidly, and thrives in any light, sandy soil, not demanding peat, as do the more delicate ones. It forms an impervious obstacle to wind when it has obtained a good height. There are some growing on the island in the upper pond which have their roots running into the water, which have become almost trees, and would seem to be striving to rival those which grow so luxuriantly on the mountains of India. They evidently like water, but the Rhododendron may be planted on dry banks if the soil be rendered good, and the plants be annually mulched with manure. The one desideratum is a light, sandy loam, or, better still, peat.

The richly flowering hybrids deserve, of course, a far more prominent place, and, with the Azaleas, are fitted to ornament a gently sloping bank or a

glade amidst the trees. But they require the soil to be made very carefully, with plenty of peaty matter, and the mulching should be continued for some years. Their colours are very rich, and for some weeks in the early months of summer they are beautiful.

Sufficient room should be given them to enable each plant to develop its form without crowding, unlike the rougher kinds, which are merely intended for a screen.

The *Kalmia* from North America is an allied shrub. *Kalmia latifolia* is one of the best, with pink, wax-like flowers, but there are several varieties which vie with it in flower and foliage; all are evergreen. It likes sunshine, and with me will not flower in the shade. It, too, demands a light sandy or peaty soil, and is worthy of careful planting. It does not attain the height of the *Rhododendrons*, and flowers later. It may be planted singly or in groups.

The *Azaleas* are charming plants, rich in flower, and in autumn rich in the colour of their leaves, but these are dropped in winter. The blossoms of the common *Azalea* are yellow, but those of the hybrid kinds have tints of scarlet, rose, orange, and white. The common hardy form came from America and the South of Europe, and there are others, natives of China and Japan, but these are not sufficiently hardy for planting out. The hybrid

forms, however, are as beautiful, and are quite hardy. These should have partial shade and some protection from rough winds, and they thrive best in soil similar to that required by the better forms of *Rhododendron*.

Amongst the earliest of the spring flowering shrubs is the *Forsythia suspensa*, coming into flower in April. It sends up long shoots which arch over and hang, partially trailing on the ground, and are covered with bell-shaped yellow flowers in great profusion. It is seen best when planted on a bank over which its long shoots may fall, but may be used as a wall climber. As the trailing shoots root readily this may be taken advantage of, and without injury to the appearance of the whole, and when sufficiently rooted they may be separated from the parent plant, and yield in a few years a series of new ones. It is sometimes catalogued in the nurserymen's list as *F. elegans*.

The *Syringas* are well known for their free flowering and the powerful scent of the flowers. They are quite hardy, and will bear more exposed positions than other more delicate plants, and it is well to have a selection of the more hardy shrubs to bear exposure and yield protection to others where required.

The scientific name is *Philadelphus*, and there are several varieties, both from North America and from Mexico. Those from the north are the

hardy ones. The best of these is *P. grandiflorus*, which, as its name implies, has the finest blossoms. It also grows luxuriantly, forming a bush from 6 to 8 feet high, is a desirable plant, and should be preferred to the more common form, *P. coronarius*, which is usually found in gardens. The scent, also, is more delicate and less powerful.

America yields us another charming family of shrubs, the Sumachs, which are chiefly desired for their foliage, but one of them, *Rhus cotinus*, has a most remarkable inflorescence which characterizes it, and is useful for indoor decoration as well as for the garden. The flowers themselves are inconspicuous, but are succeeded by feathery, cloudy masses of filaments derived from the elongation of the pedicels, of a reddish-brown colour. This member of the family, however, is a native of Southern Europe.

The Stag's Horn Sumach (*R. typhina*) derives its distinctive name from the stems and branches being covered with dense, velvety hairs, and its fruit covers are also velvety, which, being in the form of crimson spikes, add greatly to its ornamental character. But its chief value is, perhaps, derived from its handsome foliage.

R. glabra laciniata is another of the family having beautiful foliage, almost subtropical in effect. It is called the Fern-leaved Sumach, and fully deserves its name. Its long, thickly-clothed

branches extend on every side, the leaves are deeply cut, and its whole appearance is most graceful.

Buddleia globosa is a tall growing shrub about 6 or 8 feet in height, with long, narrow green leaves and globular balls of yellow flowers. It is a native of Chili and somewhat delicate, and should be placed in a sheltered position, but not crowded. It contrasts well with other shrubs in foliage, and from its rapid growth is valuable when effect is desired quickly.

Calycanthus occidentalis, the Allspice-tree (so called), is a native of North America, and likes damp soil. It is rather slow growing at first, but attains a height of 6 feet. It is chiefly valuable for its flowers, which are of a dark crimson colour, and scented. It should be placed in partial shade.

Near it, that its white, sweet-scented flowers may contrast with the dark ones of the former plant, should be placed *Choisya ternata*. It is a very free flowerer and a beautiful plant. It is known by the name of the Mexican Orange Flower. In planting it should be given a rich free soil, with leaf-mould and sand. It is named after M. Choisy, a Genevese botanist.

The Clerodendrons are usually grown in warm houses, where *C. Thomsoni* is one of the most beautiful of creepers; but two of the family are

hardy, and one, *C. trichotomum*, from Japan, may vie with the tropical species in its inflorescence, the flowers being white, surrounded by calices of deep red. It is tall and fast growing, expanding in a year or two to a width of 5 feet or more. It is rather tardy in flowering, and I have seen complaints that in some gardens it will not blossom, being, perhaps, placed in an unfavourable position, but even in leaf it is a handsome shrub. The other species is *Clerodendron fætidum* from China, not so free growing, and liable to be cut down in sharp winters, and, although it shoots up again, the flowering is delayed. It has clusters of dark red flowers, which continue for some weeks. As its name denotes, it has a disagreeable smell if handled.

Ceanothus azareus is one of the most charming of the flowering shrubs, and, although delicate (as it comes from Mexico), yet in a sunny but sheltered situation it is hardy and grows rapidly. When in flower it is one of the most beautiful of flowering shrubs, and every way worthy of some little extra care. Its flowers are formed on the new wood of the year in terminal panicles, individually small, but sufficiently distinct in the panicked clusters, and of the most lovely French blue colour. I am referring to the variety named *Gloire de Versailles*, and, indeed, it may be the glory of any garden. Blue flowering plants are

comparatively few and rare, and this tint of blue is unmatched in any other plant.

The Deutzias, again, are well known for their white flowers, and, on account of their very free flowering, are much prized.

Deutzia scabra or *crenata* is the most vigorous and grows to a height of 6 feet, but the double-flowered variety is more beautiful: the flowers are in immense profusion and continue long. It is from Japan, but there is one from the Himalayas, *D. corymbosa*, almost as good. There is also a much smaller one of the same species from Japan, *D. gracilis*, which does not exceed 2 feet. Rabbits are exceedingly fond of the shoots of these plants, and, if they get into the garden, search them out and attack them most injuriously. They have caused me a good many trying moments.

Andromeda floribunda, which has been called the Lily of the Valley Bush, from the fact that its flowers greatly resemble those of that plant, is a charming little shrub for moist places in peaty soil. It grows about $2\frac{1}{2}$ feet high, and in late autumn and winter is covered with little spikes of white waxy bells, which sometimes last until the spring. It is very compact in habit, and is allied to the Heaths, which may well be consorted with it.

All the Heaths should find a place in the wild garden; they like peat, but will do well in a

mixture of leaf-mould and sand, and look their best amidst rocks and moss-covered stones, such as are often found in the rougher parts of the garden. The *Ericas*, as a rule, have red, or purplish, or pink-coloured flowers, and these make a good contrast to the *Andromeda*, but some have pure white flowers, and the white Bell Heather is very pretty. There are, too, many varieties of the common Heather (*Erica vulgaris*), which may be employed.

There is another *Andromeda* which I should mention, *A. Japonica*, which differs from the former in having larger and more open bells, beautifully shaped, which depend in little clusters, and it has a habit of flowering at odd times. Its leaves are larger than those of the former, and it grows into a somewhat larger and looser bush.

The Brooms (*Cytisus*) consort well with the Heaths, and are suitable for like places, or they may be placed on drier banks. The common Yellow Broom (*C. scoparius*) may be employed with much advantage, and yields good colour in spring. If well planted, it grows 5 feet or more in height, and when covered with its bright yellow blossoms is equal to many an exotic plant. Then there is the white Spanish Broom (*C. albus*), which is perhaps even more effective, as its branches to the topmost twigs are wreathed in white. But both should be made use of, and the one sets off

the beauty of the other. It is only the wild garden, with its banks and glades running up into the woody places, that yields really apposite sites for these indigenous plants or their allies, and as they are so easily obtainable much may be secured with little cost.

And the same may be especially said of the Gorse or Furze, which is quite at home in the wild garden, and yields really great effects. It is well to be cautious in planting the wild variety, as it seeds so freely that in a short time it may give too much of its presence; but the double Gorse (*Ulex floribunda*) is not open to this objection, and is in itself of far greater value. When established a few years, the bush grows into grand proportions, and when covered with its truly golden-yellow masses of bloom is magnificent, and its rich perfume, which I greatly appreciate (though some may think it too lush and sweet), diffuses far and wide over its neighbourhood. It may be planted in drier situations than are safe for many plants, but the soil, if not originally good, should be enriched, and the rapid growth of the shrub be assisted.

The Hydrangeas are suitable shrubs for the wild garden. Their flowering masses last long, and their foliage is good. When well planted in sheltered situations, they attain a large size, from 4 to 5 feet high and as many across. They should

be mulched during winter, especially if placed in exposed positions. The best variety is *Hydrangea paniculata grandiflora* from Japan, which has immense trusses of white blossoms, and is said to be hardier than its congener from China. It should have a prominent position, as when in flower it is exceedingly handsome. The Chinese variety, *H. hortensis*, has usually white flowers tinged with red, but sometimes they are blue. It is said that this colour may be obtained by mixing rusty pieces of iron with the soil, yet it does not need this, for a large bush of it yields rich blue blossoms in my garden without any such assistance. There is a variegated leafed variety in the lists of the horticulturists.

The Hydrangeas do well as a background when grouped in masses, and will bear a good deal of shade. A beautiful picture of Hydrangeas in a wood in Cornwall appeared in a late number of the *Garden*, which aptly showed how charmingly they suited such a spot. In the same number of that periodical were two pictures of Tree Ferns and Woodwardias in the same Cornish garden, which illustrate the mildness of the climate in Cornwall, and the advantages which the favoured dwellers in that county possess over ourselves; but we can only try to make the best of things as they exist.

There are a good many species of *Daphne*, but

most of them are dwarf, and adapted to the rock garden; but one of the oldest, *D. mezereum*, is also the strongest and best suited for our purpose. They are spring flowers, and very fragrant. The species known as *D. cneorum* (Garland Flower) has a bright pink inflorescence, and blossoms twice a year, and there are other kinds which give white flowers.

Amongst the hard-wooded shrubs which grow to a considerable size the Weigela, sometimes known as the Bush Honeysuckle, is valuable for its free flowering and rapidity of growth; and the fact that they are Japanese plants is perhaps a sufficient recommendation. There are a good many varieties, but among the best is *W. grandiflora*, and when ordering from the nurseries it is as well to have the best. The French hybrids, when procurable, should be added. Some of them are very beautiful, and they present a variety of colours—deep red, crimson, white, and rose-coloured.

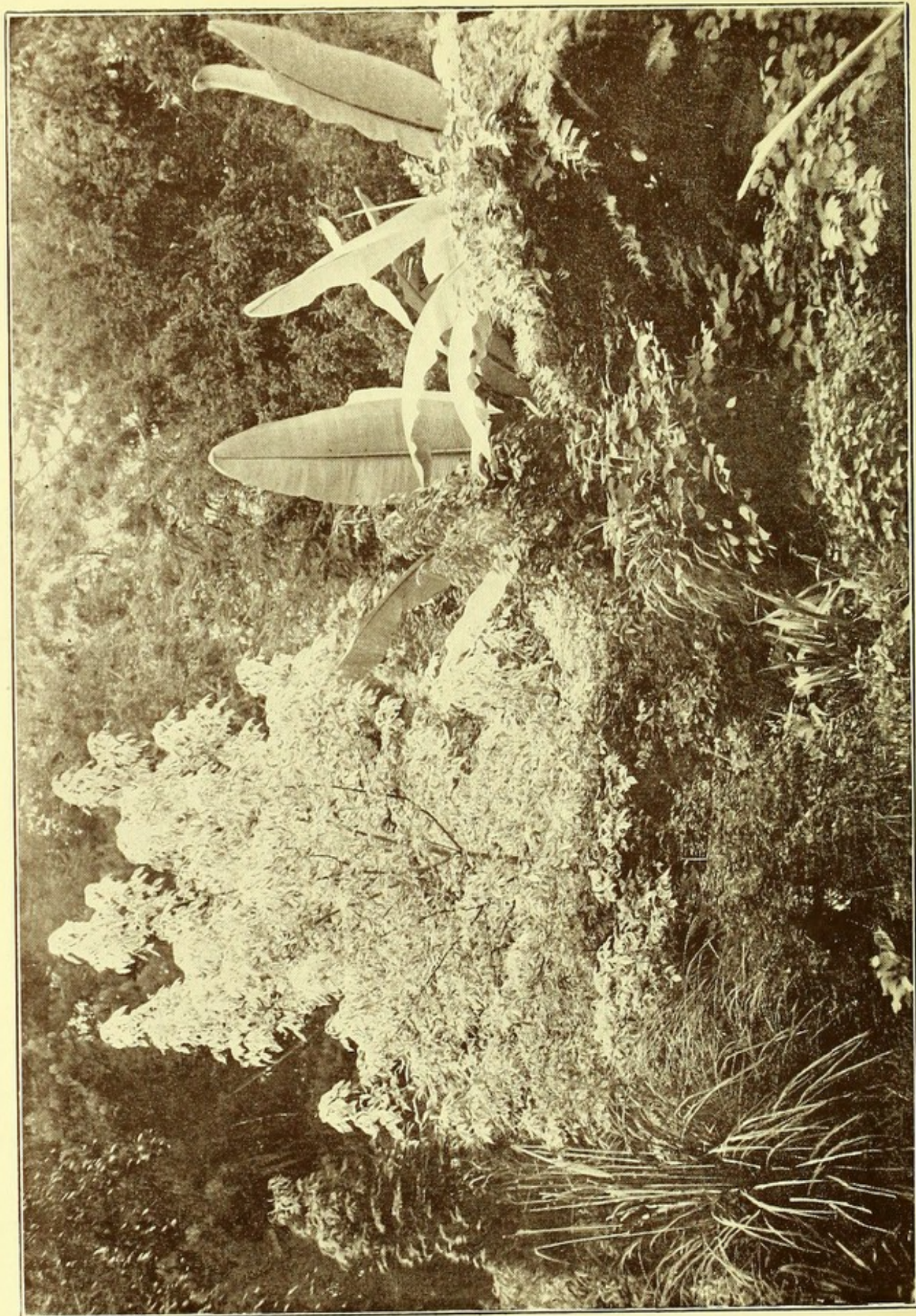
There is a shrub from China named *Xanthoceras sorbifolia*, which has elegant foliage and handsome flowers in clusters; but it is a slow grower—at least, for the first year or two—and its twigs and slight branches are very brittle, but it is worthy of patience and protection.

Garrya elliptica, from California, when well grown and attaining a height of 5 or 6 feet, forms

a handsome shrub for the background; it is ever-green, and through the winter and spring presents an interesting appearance from the number of long depending green catkins, which hang from every spray, but it can hardly be classed among the flowering plants, as its flowers are so inconspicuous.

One of the handsomest shrubs that we have obtained from North America is the Magnolia, of which there are several species. The one best known is perhaps *M. grandiflora*, which is generally seen planted against a wall; and, indeed, it needs such protection, and is not so suited to the wild garden as the one sometimes called the Umbrella Magnolia (*M. tripetala*), from its mode of growth. This shrub is valuable both for its foliage and its flowers. The leaves are very large, from 1 to even 2 feet in length, of a rich glossy green colour, and not so thick and formal as the usual kinds. The flowers are white, and from 4 to 6 inches in diameter, but not so richly scented as those of *M. grandiflora*. It is said to grow to a height of 30 feet. When planting, care should be taken to give it plenty of room, and deeply trenched, good rich soil. It is certainly worth some extra trouble.

Paulownia imperialis is another shrub valuable for its foliage, and in mild places for its flowers as well. It grows into a tree in warm, sheltered



ACER ARGENTUM VARIEGATUM (THE GREEN AND WHITE MAPLE).

situations, of 30 feet in height, but, in order to obtain the fullest development of its foliage, it is desirable to keep it cut back, when the young shoots put forth their largest leaves, which are often from 12 to 18 inches long and proportionately broad; the flowers resemble those of the Bignonia.

The Maples are shrubs which yield excellent effects in the wild garden by their beautiful foliage and rich and varied colouring. They may be obtained either quite dwarf or with spreading branches, and are suited to either background or foreground positions. The leaves of most are deeply cut, and of some are as exquisitely divided as a fern leaf, while their tints vary from rich green, or variegated with white and yellow, to wholly red and purple. Their colours thus afford beautiful contrasts, and when the white or yellow splashed leaves are interplaced or contrasted with the deep red or darker purple the results are charming.

The more attractive varieties are chiefly from Japan, and among these several may be selected of great beauty. *Acer palmatum atropurpureum* has deep bronzy purple foliage; *A. p. roseo-marginatum* is like the former, but splashed with white and rose colour; *A. palmatifidum ornatum* has delicately cut leaves; while *A. negundo argentum variegatum* has green leaves splashed with white. One of mine, which has grown to

10 or 12 feet in height, has the leaves of the upper branches pure white.

Robinson, in his 'English Flower Garden,' expresses a doubt whether our climate is warm enough for them, but with me they have done well, and have never suffered from frost, and have developed their colouring most satisfactorily. Good rich soil is required, and a sunny position.

Prunus Pissardi, as a foliage shrub or tree, is of value from its dark tints and as a contrast to the variegated Maple. Both foliage and bark are purple, but the leaves are somewhat smaller than those of the Maple. It is, however, quite hardy, and may face a position unsuited to the former. It produces both flowers and fruit, though the latter is not of much edible value.

Ailantus glandulosa, called by some 'Tree of Heaven,' though it may not quite merit the name, is a handsome shrub or tree, for it may be either cut back into a shrub or grown as a standard. Its branches, when a standard, give off graceful, frond-like sprays, some 2 or 3 feet in length, with long green, narrow leaves on each side the midrib, which arch over, giving almost a palm-like aspect; and, if the stem be cut back, this effect is increased as the fronds are longer. It has not flowered with me.

The Catalpas are handsome shrubs from North America, growing, indeed, into trees of consider-

able size when planted in warm, sheltered situations and in good soil. *C. syringæfolia* has very large leaves, and bears tall panicles of flowers somewhat resembling those of the Horse Chestnut, but more delicately cut and tinged with pink. Of several that I have planted, only one, apparently, found all that it needed in soil and situation, for it has greatly outgrown the others, and has flowered well for several years.

But I think that I have given a sufficiently long list, and I hope that I have indicated the peculiar values of each plant enough to assist my reader to make the selection which may be best suited to his garden.

Progressive additions are, I think, better than full and wide plantings—at least, for the amateur who is commencing a new garden—and give a better play to the creative faculty and a perennial pleasure in planning fresh tentative effects, leading up eventually to a charming whole.

XI

THE LABOURER

PROCEEDING down to the garden by another route, we enter the copse that shelters it from the north. A broad, winding pathway—up which we cart bracken and firewood in the autumn, grass-covered—trends its way through it. On the south side the wood consists chiefly of the tall stems of Chestnut shooting up from the stools of big trees cut down some years ago, with an undergrowth of brambles and bracken, giving good cover for the pheasants, while here and there amongst them is a Chestnut-tree of forest-like proportions towering above the lesser growth which had been spared by the woodman; and on the north a copse of young wild Cherry-trees, Ash and Oak, and big Chestnut-trees with the edible kind of fruit. The ground is broken, and great masses of rock, moss and lichen covered, jut up at intervals, with Gorse bushes interspersed, which seem to flower more or less all the year

round, and the wood always presents some patches of colour.

In the spring a sheet of Bluebells (*Scilla nutans*) covers the whole ground beneath the trees, the mass only broken here and there by the projecting rocks, and gives a rippling sea of blue as far as the scene opens, for the bracken has not yet come up to swamp it; and the sheet of tender colour has its own sweet way, flowing down over a gentle declivity or topping the higher levels, caught here and there with sunshine or shaded into deeper hues by the overhanging branches, giving a varying tint of colour and of beauty everywhere. But every individual plant of the mass has its charm—the bed of thin green, narrow leaves at the base and the tuft of flower-stalks above, each bending over in its own way and having its lovely bells depending from one side. And there is often a marked difference of hue in the colour presented by individual plants, lighter and deeper shades of blue and purple—some with the underlying tint of red prevailing and others pure white, but all in the mass yielding the broad spread of colour that is so distinctive and so charming. Then, as spring gives way to summer, the scene is entirely altered as regards colour. Tall Foxgloves (*Digitalis purpurea*) have taken the place of the lowly Bluebells, and the wood glows with different shades of red and purple. They have not the uniform sheet of

colour presented by the Scillas, but this the rather occurs in patches or in masses, yet so frequent that the whole wood so far as the eye can pierce its interstices is glowing with colour. The Fox-glove is a biennial, coming up one year and flowering the next; but the seeds are so widely scattered, and the young plants succeed each other so effectually, that there is no break in the succession, and year after year the self-sown crop is repeated, though there are seasons certainly which are more prolific than others, due, doubtless, to the subtle differences in the climatic conditions that favour the fructification of the flowers.

Then in the Autumn, when the frosts have touched the fronds of the bracken and their sprays have put on the prevailing tint of the season, there is another display of broad masses of colour, varied from the purest yellow through orange to the rich russets, with occasional patches and broken masses of still-retained green, where, from the protection afforded by the foliage overhead, the original hue of the fern has not lost the intrinsic blue which, united with the yellow, has given the verdant tint of the summer. And now, too, the interspersed wild Cherry-trees have begun to glow with the fervent colour which makes them the most prominent objects amidst the various trees of the wood, which are one and all more or less yielding the hues of Autumn.

Surely a wood is Nature's own repository of charm, yielding a constant succession of artistic effects, and in close accord with Nature's varying moods: decked out with faint tints of young green when the first awakenings of her powers are quickened by the influences of the sun's warm rays, brightened by the coloured masses we have just considered, shrouded in verdant shade during the hot summer months when shade is so grateful, and in the seeming death of the year covered with the pure, white pall of the unbroken snow.

Down this grassy path we strolled one afternoon, when the reigning period of the Foxgloves was over and that of the Bracken prevailing, and reached the gate which opens into the garden on the north, to repair to our seat under the Conifer.

'But you have not yet explained the office of the nerves that are termed motor. Surely a large portion of the cerebrum is associated with muscular action, is it not?' asked the Curator.

PROFESSOR. 'Certainly; so far as we know at present, the greater part; for man is but a member of the animal kingdom, and much of his appointed office on earth is mechanical labour. Then, too, the various actions of the limbs, incident on the ever-recurring necessities of the hour, play an important part in the sphere of organic life; and, lastly, the action of the muscles of expression, by which the varying moods are depicted on the

countenance and the play of thought is made apparent, must be provided for by the location of gray centres in the superficial convolutions of the brain, from which may arise the impulses sent downward to the muscles by which these results are to be obtained. These impulses are carried by nerves called motor, or efferent, which, arising from the gray matter, are distributed to all the muscular groups, by the contraction of which motion results. The discovery of these great centres and their accurate location in the cerebrum was the inauguration of all discovery of the physiological anatomy of the brain, which has done so much to remove the obscurity of our ignorance of this important knowledge of ourselves.'

CURATOR. 'This, then, must be the outcome of that much decried system of vivisection?'

PROFESSOR. 'Most certainly. By no other method could it possibly be derived; and it is due to the patient, long continued, and most intelligent efforts of Ferrier, Fritsch, Hitzig, Gowers, Hughlings Jackson, and many others that the deep cloud of ignorance that shrouded our knowledge of the most important functions of our structure was lifted.'

PADRE. 'And of what good is it all?'

PROFESSOR. 'Just so. What good, indeed, is just the question I expected from one of your

school, to whom the teachings of tradition are of more value than the light of science. What good, asked the Church and the laity of that dark age when Harvey, after years of patient search by vivisection and dissection and deeply intelligent thought, worked out the problem of the circulation of the blood and the true action of the heart, which proved the foundation of all we know of the mode of action of the powers of life, and has formed the basis of the science of physiology itself. The age, happily, is past when the intellectual section of humanity asks what is the good of the opening of any floodgate of knowledge, or of the bringing to bear the light of science on any of the great problems which are of such vital interest to man.'

CURATOR. 'Very true; but the discovery of the centres for motor action has proved a boon to suffering humanity directly, has it not?'

PROFESSOR. 'Yes, if only by a side-light; for by mapping out the convolutions of the brain with regard to these motor centres the surgeon is able to locate a hidden tumour pressing on the brain tissue by the paralysis caused to certain groups of muscles, and thus is enabled to remove it, and with it the pain and paralysis, the misery of mind and body to which the afflicted sufferer would otherwise have been condemned. But knowledge of this kind, which has now only begun to dawn

upon the world, is, in my humble opinion, of more value in itself than the relief of poor humanity from pain. And, to use the words of a man eminent in knowledge, "no man of science thinks less highly of a discovery because its practical utility may not be apparent."

CURATOR. 'Well, to return to our subject for a moment. The motor function of the brain seems to me to be one which has played a very important part in the history of mankind, and, indeed, in the earliest section of that history it must have been the predominant one, when the bodily necessities outweighed the mental ones.'

PROFESSOR. 'True, the ancient writer who recorded the fate of Adam and his successors as under the ban of the law that, "by the sweat of his brow he must eat bread," fairly indicated a natural law that, one way or another, has ruled his existence from the beginning until now; and labour has had a most eminent share in the world's history, and possibly one of the most dignified. It has produced the wherewithal to sustain life on the earth, has fed its millions, and has clothed them, and, still further, has civilized them and rendered them fit objects to receive the higher development which the labour of thought has endowed them with, and through the concurrent influence of widely extending commerce, born of labour, has gradually included the outlanders of

the world's inhabitants in the meshes of civilization.

‘The agricultural labourer is the basis of this great pyramid of results thus built up, and the originator of all reproductive labour, and deserves the highest consideration at the hands of those who manipulate the people's interests and the interests of the nation as an entity; and I feel very strongly that the agricultural labourer has not yet received the care and wise solicitude of his rulers which he deserves.’

Here the Padre consulted his watch, and, intimating that he had a letter to write, left us.

CURATOR. ‘But doubtless the labour of thought is not less than the labour of motion, and I think that the labourer and the artisan have failed to appreciate this.’

PROFESSOR. ‘Yes, the expenditure of vital force is as great in continued intellectual action as in the action of the muscular system. The consideration of the subject of energy in the human economy is an abstruse one; the source of energy is doubtless chemical activity—the union of oxygen with tissue matter, and its recombination in the gray matter and the conditional release of nerve force. It is strange that the feeling of fatigue seems not to be wholly due to the exhaustion of force as it would at first appear, but rather to the failure of the easy conduction of that force along the nerve

conductors, probably due to the non-elimination of the products of dissolution sufficiently fast (another chemico-physiological action). For if we feel fatigued in the pursuit of one line of thought or mental action, or even in the use of one set of muscles, we find that a change to another line of action, either muscular or mental, immediately gives relief, and we start afresh with renewed vigour. But this is a subject which has not been sufficiently investigated.'

The hoarse cry of a pheasant in the wood just behind us, and the hoarser screech of a jay darting through the boughs overhead, aroused us from the reverie which the quiet appreciation of the pipe had induced, and, as the time for afternoon tea was approaching, we left the garden for the terrace. As we turned up the path to the house we met the gunner returning from his ramble in the woods, accompanied by one of the men carrying a brace or two of pheasants, and heard his recital of when and where he had been fortunate enough to meet the somewhat unfortunate birds.

Our progress up the winding path led us towards the bend, behind which, sheltered by a big clump of Rhododendrons, is a rustic seat, and as we advanced the voice of the lost Padre, tintured with an earnest pathos, reached us, and on turning the corner the Padre himself and the daughter of the house came into view.

‘We have been talking of the good time coming when the rights of women shall have their proper recognition,’ said she, with a light of laughter in her eyes.

‘The beauty of woman has always ruled the world with an undisputed sway,’ replied the Professor; ‘but whether the demands of a less charming section of womanhood will wrest any rights from man which he lawfully holds is ever doubtful—

“A woman moved is like a fountain troubled,
Muddy, ill-seeming, thick, bereft of beauty,”

and doubtless Shakespeare had this contingency in his mind when he wrote those scathing lines.’

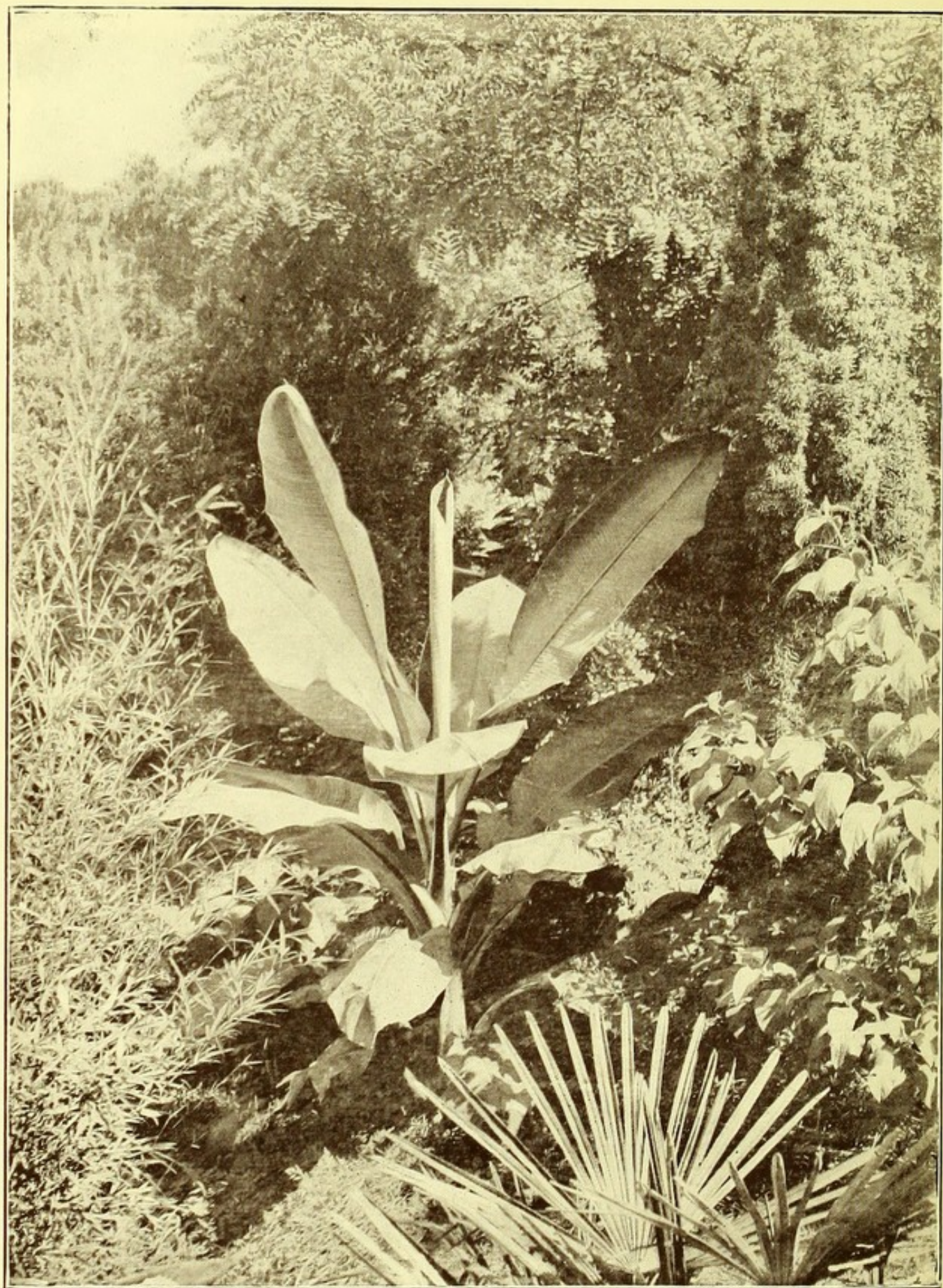
‘They made and recorded a sort of institute and digest of anarchy called the “Rights of Man,”’ quoted the Curator. ‘And then what does Wordsworth say?—

“The reason firm, the temperate will,
Endurance, foresight, strength, and skill;
A perfect woman, nobly planned,
To warn, to comfort, and command.”’

As we walked slowly up the path, led by the daughter of the house and the Padre at a little distance, we heard him quote:

“Not she with trait’rous kiss her Saviour stung,
Not she denied Him with unholy tongue;
She, while Apostles shrank, could danger brave:
Last at His cross, and earliest at His grave.”’

The Gunner, who walked with us, seemed a trifle distrait as he swung the pheasants, which he had relieved the man of, in one hand and the empty gun in another, while, possibly, he mused on the light that lies in woman's eyes in general, and in some in particular.



A YOUNG MUSA IN A SHELTERED CORNER OF THE WILD GARDEN.

XII

ON THE MAKING AND MANAGEMENT OF A WILD GARDEN

I THINK that few who have seen the charms of a wild garden would not wish to essay the making of one. And, given the few essentials required, the gradual development of such a garden is by no means difficult.

The essentials are a more or less rough or rustic spot, with shelter against too violent winds, and a free water-supply. The soil can be made to suit the various plants by degrees as you are ready to place them ; and you need no well-made beds laid out formally and but few paths, and these should be narrow and winding.

The essence of the thing is to leave as much as possible to Nature ; to disturb the rusticity of the spot as little as possible ; and, when planting, rather to aid the existing picturesqueness than to attempt to 'lay out' the garden.

Such being the case, it is clear that the spot

selected should have more or less of rustic beauty; should, if possible, not be flat, although this is not absolutely essential; should be protected by banks of trees, or, still better, should be surrounded with them. The ideal spot is a glade in a wood, and, given the wood, it is not difficult to create the glade by judicious cutting down and thinning out. For those who do not possess a wood the next best thing is to select a dell or hollow, or, still better, a rough piece of ground of varying elevation, or a dip on the side of a little hill, and if rocks and stones are there, such a spot, with time, can be made an ideal one by the planting of trees and high-growing shrubs on the side of the prevailing winds. And, if planting be had recourse to, I would advise the selection of non-deciduous trees, and these, of course, will chiefly be the Conifers. All these, with the exception of the Larch, are evergreen, and amongst the handsomest of these is the Douglas Pine, and, happily, it is one of the fastest growth. Some which I planted about fifteen years ago are now 40 feet high—tall, stately trees with branches so luxuriant that already they have almost hidden the trunks, and with crests growing so fast that the annual shoot is now often from 5 to 6 feet in length. And they very rarely lose their heads, which, when thus fast growing, are so lissom, and sway so easily in the breeze, that heavy birds do not care to light



THE PLANTED GLADE IN THE WOOD.

on them, and, should they lose their central shoot, they quickly produce another.

Perhaps next to the Douglas Pine should come the Deodar, which has a like habit, and, if planted in good soil and with fair protection, grows very rapidly; but it must have space and no overhanging boughs of earlier planted trees. The somewhat slower-growing Pines, as the Spruces and the Piceas, might be interspersed between them. I think that, outside these, I should plant Larch and some other deciduous trees, as Chestnut and branching Poplar or Aspen, and in the foreground the lesser Conifers, as Thujas and Retinasporas. Some of the Thujas have golden yellow foliage, and these, judiciously placed, are very effective.

But water, either in ponds or springs, is an essential condition. Possibly it may be laid on with pipes in some cases, and in such a pond must be dug, the larger the better, of course, but even a small one, if the supply can be kept up, will afford the water needed for the growing shrubs and trees, and for the plants which ultimately will be added. In making a pond, of course, some natural depression is desirable, but not absolutely necessary. It should, if of any size, not be round, but following the contour of the ground, and, as a considerable amount of earth must be taken out, this should be used to form a dam and to break the evenness of the ground on one side.

It is very desirable to have a low bank sloping into the water at one end and a high one on the other, for there are many beautiful plants which love moist, boggy ground, and can only thrive there, while the bank above may be planted in such a manner as to add greatly to the beauty of the pond.

If a portion of the ground in the centre be left when the excavation is made so as to produce an island, however small, much may eventually be made of this. It would be a fit place for Bamboos, Polygonums, Eulalias, and Pampas Grass.

Should there be a little stream available, the difficulties will be greatly lessened. It is easy to render it serpentine, to expand it to a pond or lake, or to break the monotony of its course with blocks of stone, natural or artificial, and cover them with soil for Sedums, Saxifrages, Ferns, or Mosses.

In making a pond it is necessary to line it with clay about a foot deep, or the loss of water by soakage will be too great. Then, if Water Lilies or other aquatics are to be planted, a layer of leaf mould or soil dug from a Fir plantation, or any light, well-decayed mixture, should be laid over the bottom, or, rather, the margins, for water plants will only grow in shallow water of a foot or two in depth.

The proper aquatics tend to render the water

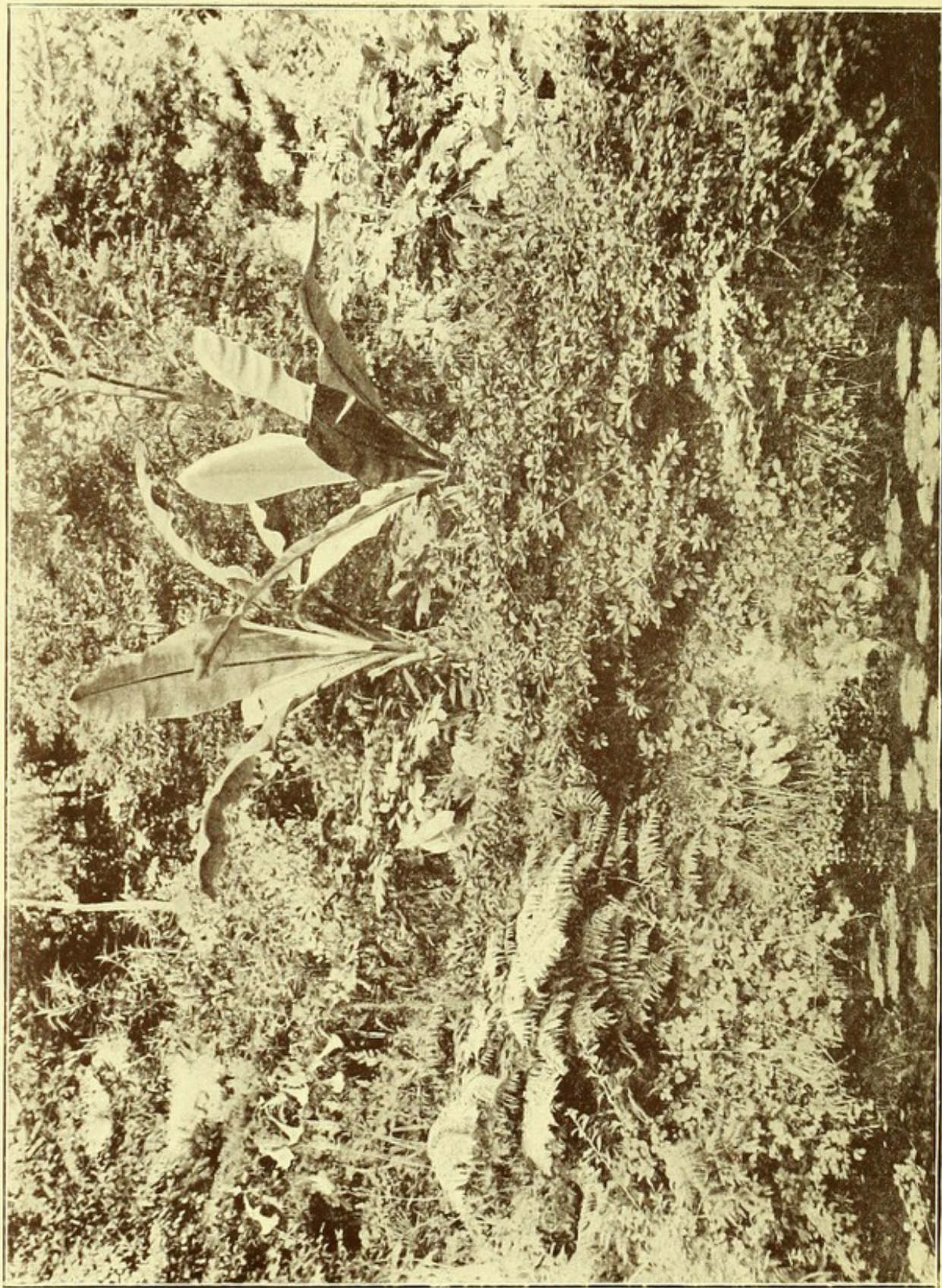
pure by aeration and to fit it for fish, and, indeed, both should be there, and the balance of organic action between them will keep the water from being stagnant. And this is of great moment, for, however pretty the pond may be at first, if not aerated by fish and water plants (or, of course, by a current of water through it) it will soon lose its beauty and be covered with a scum of *Conferva*, which will in time render it rather an eyesore and a nuisance than a charm.

If fish be placed in it—and, as I have said, this is very desirable—I would recommend that trout of the lake species should be selected; they are now very easily obtainable, and at a very moderate cost if fry be used. There is no difficulty in doing this, as the requisite number, according to the size of the pond, are sent out in tin cases or cisterns in the spring or the earlier months of summer, and may be transferred to the water, where, if there are already growing water plants, they will thrive without further care, but the pond should be prepared by first planting it. In one of these chapters I have given the different forms of aquatic plants and their mode of use.

Should the site of the garden be selected where rabbits are present, it is absolutely necessary to guard against their entry, and this should be done at once. If they can get in they prove the greatest pest, attacking all the newly-planted flowers and

shrubs and most of the older ones. They seem to have a diabolical instinct for searching out the most precious additions to the garden, and I have suffered both in mind and purse by their ravages; for, although the garden is carefully wired in, they occasionally find ingress, either by a gate accidentally left open or by a defect in the netting, or by climbing over the fence when overgrown with creepers, or by some other method known only to themselves, and, as the place offers unusual cover, it is with the greatest difficulty that I can destroy them.

The fence should consist of posts set about 15 feet apart, with three rows of iron wire, and these should be covered on the outside with wire-netting not less than 4 feet wide, of which 6 inches should be buried in the soil. The manufacturers make a convenient form of wire-netting, of which the lower 2 feet are of small, $1\frac{1}{4}$ inch mesh, and the remainder of a larger mesh, say 2 inches. It is, of course, cheaper than if of one uniform small mesh, while it answers the purpose quite as well. Even the gate must be protected with wire-netting. On first setting up my fence I used only 3 feet wide netting, and soon found that the rabbits got over this, either by climbing or jumping. It is well for the upper 6 inches of the netting to be loose and bent outwards, even if the width be 4 feet.



PICTURESQUENESS IN THE WILD GARDEN.

Having thus the garden enclosed and protected, and a water-supply insured, the planting may be commenced. It is not essential to cut paths at first, or, indeed, at all in some cases, but if one is desired the path should on no account be a straight one. The desire to be obtained should be the charm of picturesqueness, and everything formal should be most rigorously excluded. The path, then, must wind. It is well if it can do this through groups of trees rather than across the open ground, and should, of course, have a purpose; I mean, should lead somewhere, and have a natural *raison d'être*. If winding through a glade or round a piece of water, it is best grassed rather than gravelled, or, better still, mossed, if mosses can be obtained, and, at any rate, the rough natural grasses should be dug up and replaced by sowing lawn grass of the finest sort. The wild Ferns of the country massed at intervals along its course improves its aspect.

At this stage it is desirable to decide whether it shall be simply a wild garden or a subtropical wild garden, by which I mean, whether it is intended to subsequently plant, when sufficient protection is afforded, tender subtropical exotics.

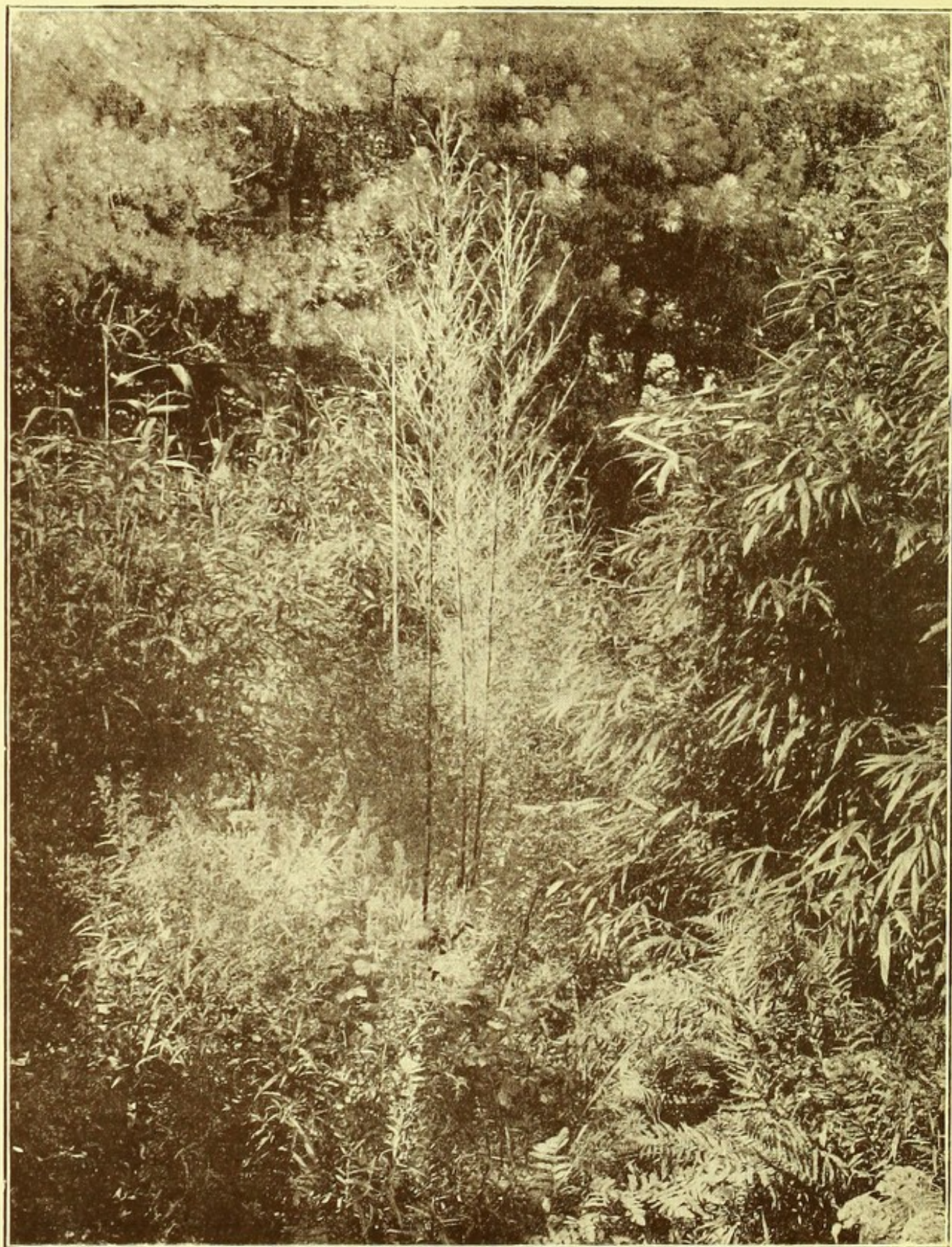
This is only possible where there is complete protection, but the wild garden may be attempted at once where there is moderate protection only, for there is a large number of plants suitable for

the wild garden which are perfectly hardy even with ordinary exposure. I have enumerated and described them in the chapter on the hardier exotics, but I may indicate here the manner in which the planting may be commenced, as taught by the experience I have more or less bought.

The plants should consist chiefly of those which make a display by their height, the size and character of their foliage, and the masses of their inflorescence. There are some, indeed the chief number of families of plants which like moisture, which yield effects by their rapid growth and commanding height, and if there be ample water-supply they may at once be had recourse to.

Amongst these are the Bamboos, for although they attain their finest effects when associated with other tropical plants, they may be used with the hardy perennials with much success. They should be selected with some care. Some of them demand much shelter, but the hardier and freer growing ones are capable of standing a great deal of exposure, and are also the least costly.

Bambusa Japonica, or *Métaké*, is one of the best of these, and the most easily obtainable. The scientific name is *Arundinaria Métaké*. In planting this a good clump should be obtained, as all the Bamboos take a year or two to form rhizomes, from which the culms or stems are thrown up.



YOUNG SHOOTS OF BAMBOO.

A hole should be dug some three feet deep and as many broad and long. The bottom should have a layer of stones, and over these should be placed a layer of well-rotted material, and then the hole may be filled up with light, rich soil, the ball of roots firmly embedded, and a mulch of manure placed around the stems. All the Bamboos require feeding well; stable manure should be given every spring, and when growing fast they may have an occasional dose of liquid manure. Some of my clumps of this Bamboo have attained a great size, 6 or 8 feet through at the bottom, and as the culms bend over at the top the head covers a far larger space, and they are from 15 to 19 feet in height. This growth has been attained in eight or ten years.

There are other species of Bamboo which may be added, and they would do better planted between the clumps of the Métaké. They belong to the *Phyllostachys* group. One of the handsomest is *P. aurea*, which grows to a height of 15 feet, and having beautiful uncovered yellow stems and a head of feathery fronds. It, like most of the others, is a native of Japan.

P. Quilioi resembles it in general appearance, but its stems are green. It grows still higher, and with me has attained a height of 18 feet 6 inches. The temporary sheaths which cover the culms as the young shoot comes up are beautiful. They

are pinkish-brown in colour, deeply mottled or barred with purple. This is a remarkably fast grower when it has been established a few years, the spaces between the internodes or rings being very long, and I have measured 8 inches as the growth of one day. The stems are 2 inches in diameter.

P. mitis is another noble Bamboo, of great height and beautifully arched. The culms, also naked when the temporary sheaths have dropped off, are first of a deep green enamel, and then turn a rich yellow.

These Bamboos have the advantage over those of the *Arundinaræ* in not retaining the sheaths which in the Métaké and others of this family are persistent, and cover up the stems almost completely.

B. erecta is another which I can strongly recommend. As its name implies, its culms run up perfectly straight, and, gradually tapering, give off their fine branches, almost surrounding the stem, at an acute angle. Its leaves are a rich green, long and tapering. It is rather a delicate plant at first, and requires protection, but when established it grows rapidly, and will overtop the Métaké, and becomes a much more beautiful Bamboo in every respect.

These are the Bamboos that I would recommend to be planted at first. They may, of course,

be followed by the more delicate and costly species, but a certain amount of experience should be gained before they are procured.

Amongst the hardiest of large-foliaged plants, where damp soil may be secured, the Polygonums obtain a first place. *P. Sachalinense*, from the island of Saghalien in the North Pacific, grows in this climate to an immense size, and although the stems, which are from 12 to 14 feet in height, die down in the winter, yet they come up early in the spring, and in summer yield a mass of foliage, the leaves being 8 or 9 inches across, of a good green, which in autumn turns a rich yellow. They flower profusely, and although individually the flowers are small, in the mass they are effective. The plant has a strong tendency to spread, which demands ample space, and this should be remembered when planting. Its effect is best when its boughs overhang water.

P. Sieboldi, from Japan, is more compact, its stems rising close together, and its branches arching out on all sides, which in summer are covered with inflorescence, and well into the autumn it still is an object of beauty, as although its leaves drop, its white seed-covers are retained, looking like flowerets. Its height is about 8 feet, and it attains this a year or two after planting. The whole ball of roots should be taken up after three or four years and replanted in rich soil. This will

prevent the straggling habit of which many complain.

Eulalia zebrina is another handsome-foliaged plant which may be strongly recommended in commencing the setting out of the wild garden. It prefers moist ground, but if planted in good soil, well mulched, it does well. A good deep pit, drained at the bottom with broken rubbish, and filled with light soil enriched with manure, should be provided, as it need never be moved when established. I am anxious to inculcate the necessity of complete provision when planting, as I have frequently regretted not doing so sufficiently, and the new soil of a freshly-made garden has none of the advantages of the matured soil of the established border.

The *Eulalia* grows 6 or 7 feet high, and when its long, arching leaves have put on their yellow bar markings it is very ornamental as a clump in some conspicuous place.

The Rheums (Rhubarbs) are another class of noble foliage which I would recommend to be planted in rough places, where they may have ample room to spread their great leaves and raise their lofty columns of flower-spikes. They, too, require a deep, rich bed for their roots, and to be well mulched in winter. I have already described the different species to be selected. They must on no account be crowded in with other plants.

Perhaps the grandest of all foliage plants, except the tropical Musas, are the Gunneras, and in furnishing a wild garden should be early adopted. But they must have water, and should by choice be planted on the banks of a pond or near a watercourse. Each leaf will expand in a year or two to 20 or 30 square feet of superficial extent, and the transpiration of moisture from such leaves must be enormous. The bed in which one of these is planted should be carefully prepared, for in a year or two it will occupy a large space with its ever-increasing root masses. As I have before given directions for the preparation of the pit or bed I need not repeat them here. The young plant that you will receive from the nurseryman will perhaps mislead you from its small size as to its future requirements, but if what I have written be remembered the mistake of placing it in a small pit or in a confined situation will not arise. The level of the pit should be 6 inches below the surrounding ground, in order to flood the plant, when matured, with sufficient water.

The Eremuri are expensive plants, but of great beauty and striking effect. I had not heard of them until a few years ago, but I would not be without them now, and I would strongly recommend, when making a new garden, to bear them in mind. They require a certain amount of shelter, and should not be placed where wind and

rain may batter them. They do not require a moist situation, but should be well watered when sending up their splendid flower-spikes. The ground should be well prepared for three or four plants, placed about 3 feet apart. The pit dug for their reception should be deep, well drained, and filled with good rich soil. Their roots are very long and fleshy, and extremely easily broken; they should carefully be spread on the level surface before the last 8 inches of soil are filled in, and then covered up and very gently pressed down.

I would, were I making a new garden, prepare a place for the *Lilium giganteum*, and if price is not much considered, a group of half a dozen should be planted, 3 feet apart. It must be remembered that they will not probably flower for four or five years, or perhaps more, but the year of their flowering will be an *annus mirabilis* in the garden. Perhaps it would be well to plant only two bulbs in the first year and two the second and third, so that the display may not be confined to one year; then the young bulbs formed around the matured ones will keep up the supply. But the bed should be prepared of sufficient size, and not less than three feet deep, as before, well drained and filled with light, good soil, in which there is an admixture of leaf-mould and sand.

Of course, the more common Lilies, which deserve a place in every garden, may be used



ARUNDO CONSPICUA (THE NEW ZEALAND ARUNDO).

with great advantage here. They should be grouped together in suitable positions. Many of them like shade, and some do best in moist ground, as I have stated in the chapter on The Hardier Exotics. It is a good plan to plant Ferns amidst them and around them to shade their foliage and for artistic effect.

The Day Lilies (*Hemerocallis*) may early be had recourse to, and should have damp situations. They are effective both for their flowers and their foliage, and the different species provide blossoms for the greater part of the summer months.

Arundo conspicua, from New Zealand, forms an exceedingly handsome clump, and should be placed in a prominent position, but a sheltered one, as in severe winters it suffers greatly if exposed. It is hardly ever seen in English gardens, yet it is a most valuable addition, and especially so to the wild garden. It, too, needs to be planted with forethought, and a much larger pit should be prepared for it than its size, when first received, would seem to warrant. In a few years it will occupy a space from 3 to 5 feet across. It is valuable both as regards foliage and flowers, which commence to unfold on the tall, graceful stems early in July, and continue in full beauty until late autumn.

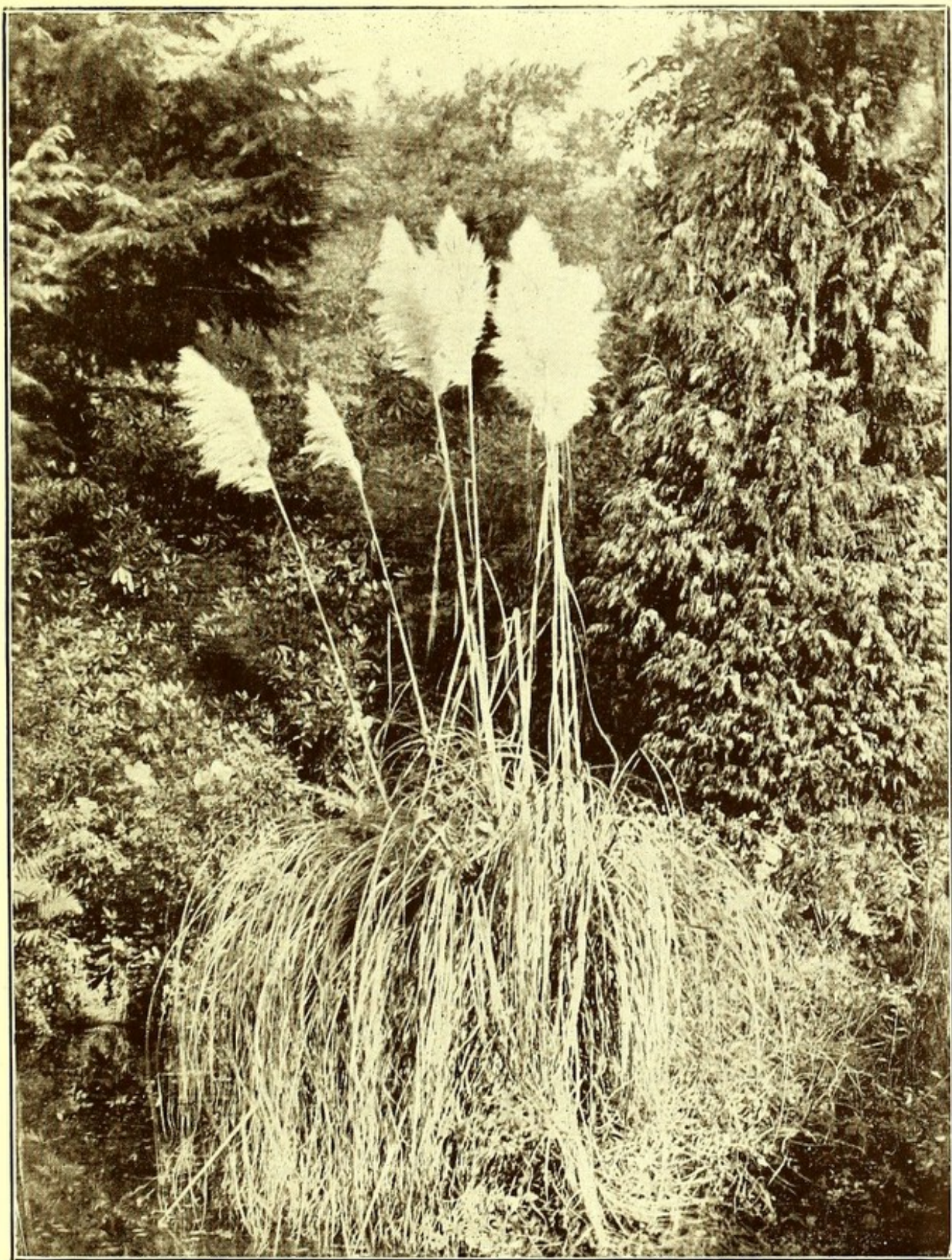
The Pampas Grass (*Gynerium argenteum*) is too well known to need description, and is a plant

very suitable to the wild garden. It looks particularly well when planted on a small island in the water, which should be at least 3 feet high, to allow of the depending leaves hanging over, which in a short time will hide the earth completely.

The Spireas, both herbaceous and shrubby, may be used extensively. They should not be scattered as single plants, but placed in groups. They are all damp-loving, and in very dry ground few of them thrive. They vary much in size, both in breadth and in height. *Spirea gigantea* is the tallest of all, rearing its stems, crowned with broad masses of flowers, 6 or 7 feet from the ground, while the little *S. filipendula* is only some 6 inches in height. There is a wide choice, therefore, in the variety of plant and as regards the situation to be selected.

I have stated that I have made great use of the Funkias, and both for foliage effects and for their flowers they are most useful. Do not plant them in rows, as in the formal garden, but in masses more or less, except in the case of the largest forms, which may be placed singly. The rich, large, glaucous leaves of *F. Sieboldi*, even of a single plant, are very effective.

A reference to former chapters will suggest many other plants which may be made use of during the first year or two, but those I have



GYNERIUM ARGENTUM (PAMPAS GRASS GROWING ON ISLAND).

given in this chapter will make an effective commencement.

So much depends on the size, characteristics, and resources of the plot at command, on its water-supply, the amount of shelter afforded, and on the nature of the ground—whether level or broken—that much must be left to the judgment of the curator as to the selection of plants and their distribution, but I would again strongly urge that all formal effects should be studiously avoided, and that much should be left to further development.

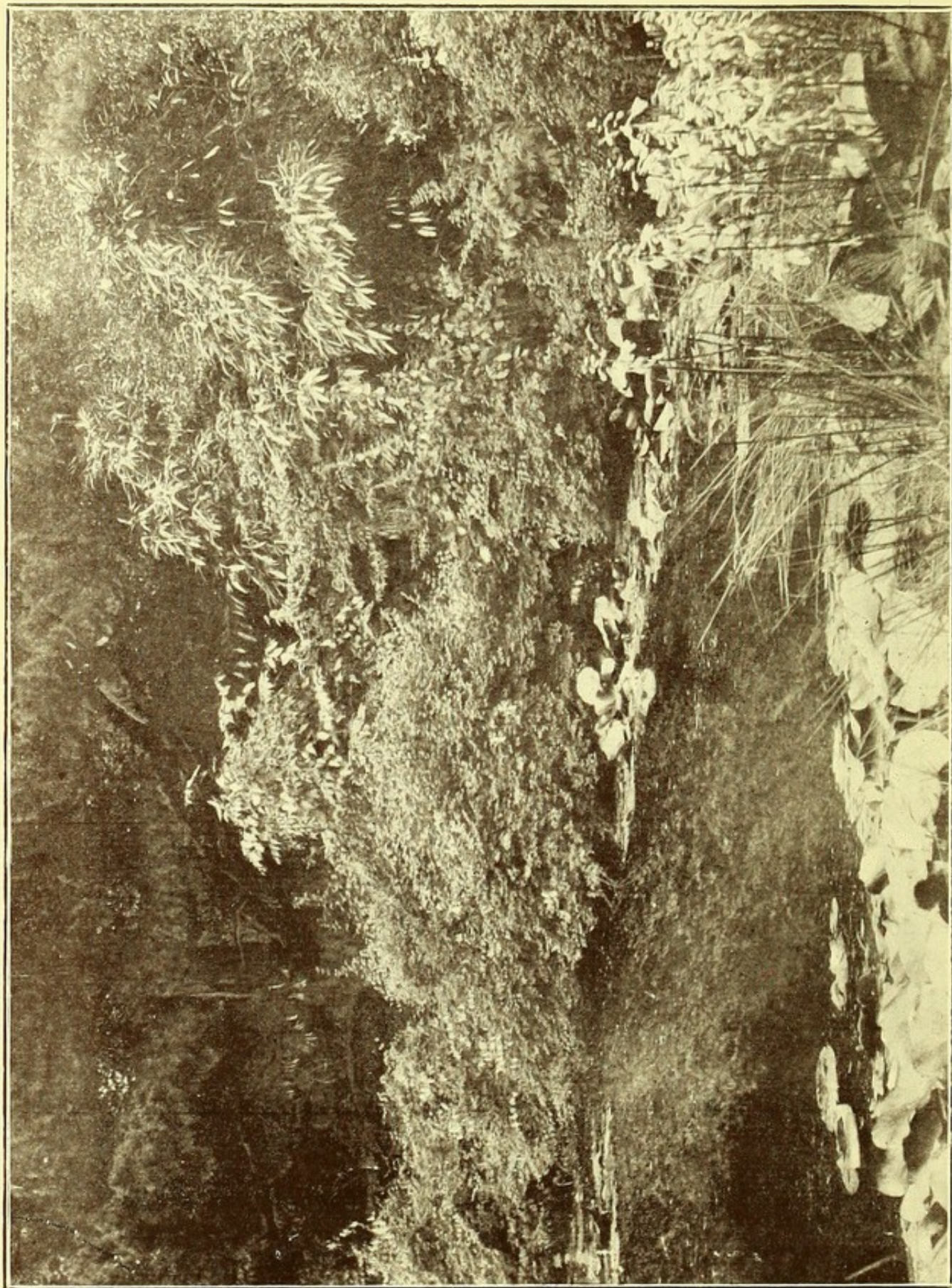
When the framework of the garden is created and sufficient protection gained, it may be desired to commence the addition of the more beautiful tender exotics, and in their selection it should be remembered that they will require to be taken up in the autumn and stored under glass, and that in a few years, when they have attained their fuller growth, the demand for space will be considerable.

I would recommend that during the winter months a large heap of earth, manure (from the cattle-sheds, if possible, rather than from the stable), and dead leaves should be made, and repeatedly turned over and mixed up. In making the garden, the holes dug will all require to be filled with prepared soil. In my less experienced days I thought that the soil dug out, if well mixed

with manure, might be replaced, but manure thus mixed takes a long while to be effective ; it requires to be thoroughly incorporated with, and assimilated by, the soil, and even then the resulting mixture is not so good as that of the long-used and yearly enriched soil of the older garden. This is a matter of great importance, and I am anxious to save the reader from the disappointments that I have met with from such a mistake.

In this list of plants which are suitable and desirable for the wild garden I have tried to indicate those that would be the best for a commencement, but there are very many minor plants, as regards general type of leaf and flower, which, perhaps, may be available from the borders of the regular garden, which may be made use of in filling in some vacant spaces and giving a more finished look to the newly-made pleasance.

I do not wish to insist that these should be excluded entirely, but I would desire most strenuously that the effects and conditions of the formal garden should not be imitated, but rather that, in the framework of the garden, ample space and freedom for further extension should be retained. Breadth of effect is what should be aimed at, and this may be gained even in a comparatively small space. The larger plants which I have enumerated, if judiciously placed, will produce this and give some of the charm which



A BANK OF THE UPPER POND.

is included in that very comprehensive term picturesqueness.

Above all things, there should be no 'bedding out' of plants; indeed, they must all appear as if growing naturally in the grass which covers the space and forms such a tender stretch of colour, harmonizing with the foliage and contrasting with the tints of the flowers, giving the feeling of freedom which is so absent from the formal border, but should be so characteristic of the wild garden.

The presence of a sheet of water, even though small in extent, greatly contributes to this breadth of effect and freedom and expanse of atmosphere, and this is one reason why water is desirable.

In those cases in which a copse or larger wood is available, which may more or less surround the garden, the results aimed at are more easily effected, and, when the including fence can be hidden and the appearance of the garden merging into the wood is acquired, the possibilities are many. The belt of wood should not end abruptly, but the trees should be thinned out and deep vistas opened, and amidst the sparser trees of the foreground shrubs and plants which like some shade may be inserted and the ground be planted with bulbs, so that even in the early spring forms and tints of beauty are there to welcome you.

I am conscious that my garden has become too

full and crowded, and that it has lost some of that breadth of effect I should have desired; indeed, parts of it amidst the Bamboos, Bananas, Polygonums, and other exotics, have merged into jungle, but even this may be allowed if only restricted to reasonable limits.

XIII

A BRIEF COLLOQUY

THE Professor and I had been sitting on the lawn in easy-chairs this balmy afternoon, under the subtle influence of Nature's repose, when only light zephyrs, softly moving, caressed the delicate nerve terminals of the body surface, and the exquisitely toned temperature so exactly suited the requirements of the structural elements that a sense of perfect repose resulted, aided, doubtless, by the chemical enthrallment of potent Nicotine, that goddess amongst drugs.

I had been reading an account some little time before of a case of hypnotism that had produced very beneficial results, and I asked, 'What do you think is hypnotism?' thus breaking in on the nervous repose we were enjoying.

'Ah!' said the Professor, 'that is a subject that we little understand as yet. It is a force that, produced by the brain power, or nervous power, of one, may be so thrown forward or projected as to influence the nervous system of another. But

what is this force? I hold that nerve force, as it is termed, is a mode of motion which, set in action from a cerebral centre on the one hand, or from a nerve terminal on the other, is transmitted along the carrying nerve by molecular action propagated from molecule to molecule with intense rapidity, and ceasing only when reaching its terminal, and setting up a like movement of molecules in the nerve elements of that terminus, which was the result desired.'

'If this were all, it is manifest that it could not be transmitted further through space not filled with that molecular substance,' I suggested.

'True,' he replied. 'I admit that to a certain extent; but at the back of the question lies: What is it that originates the motion? The will, as regards the cerebral centre. And what is the will? Molecular movement in a presiding mass of gray cells, set up by a current of molecular nerve action or motion, in this case thought. Now, is it possible that the motion traversing the nerve elements may be projected through the intervening ether (not air) by which light travels, after reaching the nerve terminals, until it reaches the receptive elements of the nerve terminals of another human being and sets up a like action in molecular elements of those nerves, ultimately reaching the cerebrum and producing a replica of the adjustment of the molecules of the receptive centres of

the other, and a repetition of the idea, or will, of the operator? As regards the medium designated ether, for want of a better name, we have recently had the phenomena of wireless telegraphy to suggest a universal medium, even if the theory of the wave movement of light had not already done so. If traversable by electricity, why not by nerve force? *I.e.*, if the molecular action which constitutes electricity can travel, first, through the molecules of metal, and then be transmitted through the molecules of ether, why should not nerve force liberated from the nerves be transmitted also through the ether, and, like the electrical force, be gathered up, received, and transmitted by the receptive material elements of the other side, in the one case copper wire, in the other living nerves?’

‘That seems a plausible hypothesis,’ I said. ‘Bulwer Lytton long ago suggested, in that queer story of his, the transmission of concentrated nerve force, sufficient to strike down a man at a certain distance, to which he gave the name of Vril.’

‘It is strange how glimpses of forthcoming ideas are occasionally vouchsafed to thinking minds,’ said the Professor.

‘But how do you account for the strange phenomena which sometimes accompany hypnotism, such as the application of a piece of cold

wood to the skin of a patient under the influence of suggestion actually producing all the physical conditions of a burn?' I asked.

The Professor replied:

'All the physiological processes of the body—secretion, excretion, and the phenomena of cell life in every form—are under the influence of nerve action, and controlled by it, and it is allowed by many physiologists that there is a section of the nervous system, which is called the trophic, under whose influence the processes of the phenomena of life are controlled; and this has been held to explain the strange facts which are so well known to occur in the autohypnotic condition of trance—when, for instance, all the signs and symptoms of bleeding scars (stigmata), resembling the supposed or described ones of the great Sacrifice, have been produced on the palms and feet of girls imbued with religious mania in a state of trance—and if so, why is not the theory sufficient to explain the raw burn produced by the dry wood placed on the skin of a patient under the influence of hypnotic suggestion? To me the phenomena are alike, but differing only in character and degree. And, further, I cannot understand why this power has not been applied for good in the treatment of cancer, which pathologically is only an uncontrolled, and, I admit, at present uncontrollable, cell growth, which proceeding so rapidly that, by mere excessive cell

life the tissues themselves are destroyed by undue pressure. Why not by hypnotic suggestion under trophic influence control the exuberant cell life and stop the process ?

‘Ah, if this could be done, what an amount of human misery and agony it would obviate!’ I cried.

‘Certainly,’ said the Professor. ‘Some of the more incomprehensible ways of Providence, it appears to me, lie in the fact that but knowledge or science is wanted to ward off from poor human nature the many ills to which it is prone ; a vast number of riddles is propounded by Nature that but await the solving to rid mankind of the direst pests, but so long as ignorance exists man bears the penalty. It is an aphorism that knowledge is power, but it is only of late that this is shown to be a fact of the greatest significance. We have only to discover the true causes of pestilence and plague to avert the consequences, but without the discovery we bear them, and have borne them for ages past. We have only just discovered that that most awful plague malaria, which kills its tens of thousands in every tropic zone every year, is due to the bite of a mosquito, and, indeed, to the bite of a single species of mosquito (the *Anopheles*) ; and if only man can destroy the germ of that mosquito, or protect himself from it during the hours of evening and night, he is free from all

such risk. Yet more difficult of solution is the question why a particular species of mosquito should be so constituted as to play the host to the germs of the malarial parasite, and yet further to be rendered capable of transmitting them, after the necessary changes of form in its body, to the glands which communicate with the tube by which it pierces the human skin, and thus inject the germs into the blood. Why, if other mosquitoes could exist without this fatal adaptation, should one species be so constituted? It seems to me, however, that mankind has paid the penalty of want of science for all past ages, but that given the necessary science in the future, it may metaphorically snap its fingers at the risks and traps which Nature has laid for it.'

'Well, well,' I said, 'this little world will be all too small to hold its inhabitants when that time comes. And what then?'

'Ah, what then?' replied the Professor, relapsing to the quietude that my first query had disturbed.

XIV

THE ROUGH PLACES IN THE WILD GARDEN

IT is fortunate if the site of the wild garden affords rough places, rocks, and irregular broken banks, deep recesses from which ooze tiny rills of trickling water, higher masses of earth held together by the roots of overhanging trees, broken stony ground between the trunks of the encircling wood, or grassy glades running up into the shade of forest trees.

Such places are usually covered with brambles and thorns, or rank grass and the coarser forms of weeds, but are capable of yielding peculiarly beautiful picturesque results, and contrasting with the more regular aspects of the planted plots, to the enhancing of the charms of both.

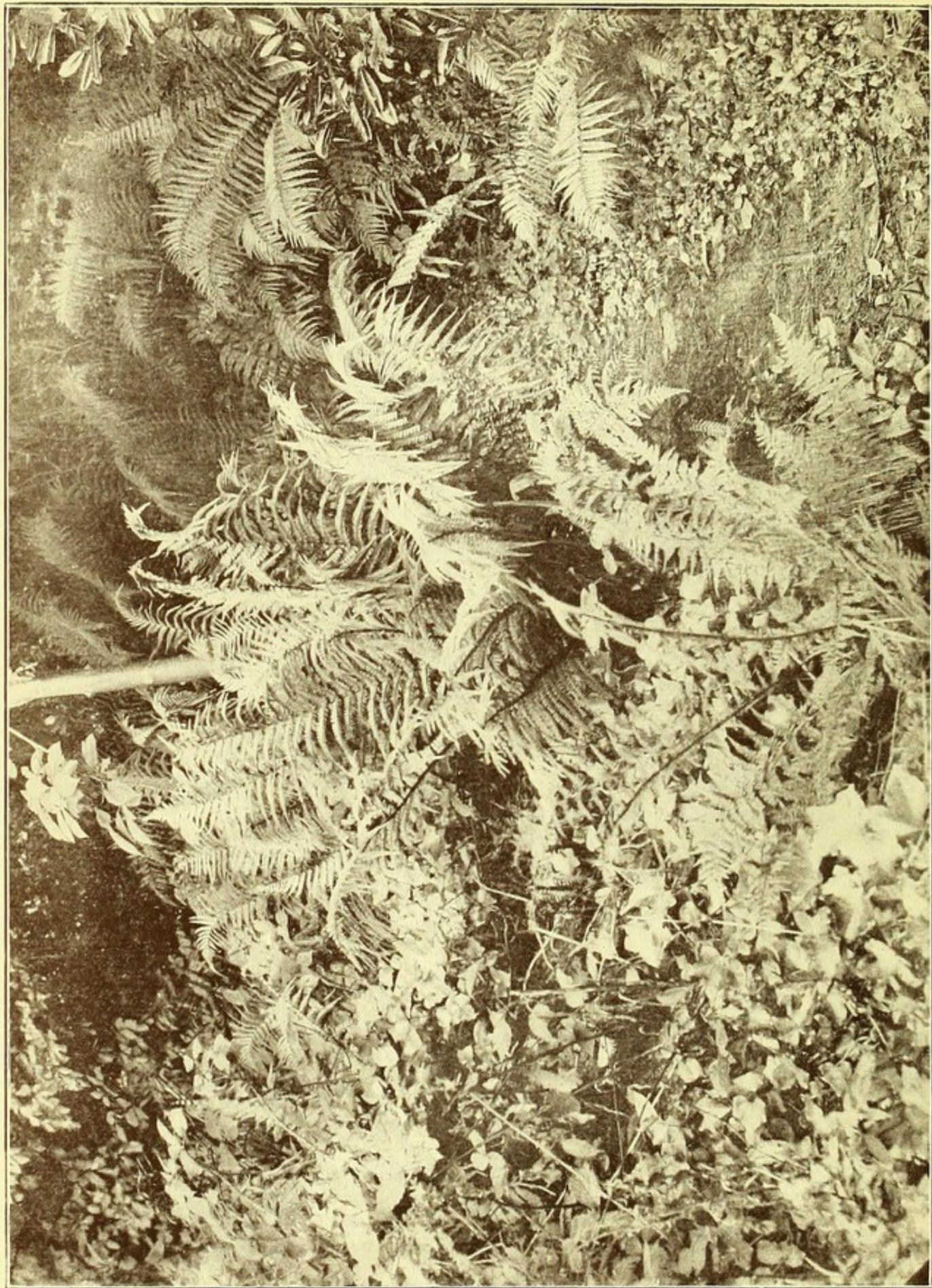
Many species of plants, native and foreign, may find fit and appropriate places in such conditions, and conduce to change the unsightly spots to nooks or spaces of peculiar beauty.

Nature will materially aid in this direction so soon as the ground has been cleared of the encum-

bering briers and coarser weeds. There are the seeds of many flowering plants often lying concealed in the soil of such places, which have never had a chance of fructifying whilst deprived of light and air. I have found colonies of Bluebells and of Foxgloves springing up in unlikely places when the ground has been freshly cleared, thus indicating that Nature was only too ready to render beautiful such waste places if she was given the chance. And how charmingly can she paint the bare blank wall, or stony pillar, or uncovered rock, with tender greens or olive browns or rich yellows !

In Indian towns or villages, especially where some municipal influence has been exerted, the walls are often whitewashed and left glaring in the too bright sunshine, to the detriment of one's eyesight and injury to one's sense of beauty ; and I have rejoiced to find some while after the untimely work had been done that Nature's kindly influence had stepped in and repaired the mischief, staining the bare white walls with tender colour, planting little ferns and diminutive rock plants in the crevices, and the blank spaces with lichens and mosses, washing off the superfluous lime, and bringing the original colours of the stones again into view.

And in the rough places we are considering Nature's kindly influence will soon be exerted, but



THE FERN PATH IN THE WILD GARDEN.

may be aided by judicious effort, so that the time may be shortened ere the beautiful replaces the unsightly.

Clumps of ferns may be brought from the neighbouring wood, and if taken up with sufficient earth soon re-establish themselves in damp spots such as I have mentioned above; and the varieties which may be met with there, or gathered from the banks of shady lanes or branch-covered water-courses, are many indeed, and all according to their peculiarities of size or form may be intrinsically useful.

The soft plummy masses of the fronds of the Lady-fern (*Athyrium filix fœmina*) may overhang the bank of the little water-oozing ravine, and the long, simple, or undivided fronds of the Hart's tongue (*Scolopendrium vulgare*) may depend from beneath, in marked contrast of form, while in the deeper recesses the lovely Maiden-hair (*Adiantum capillus veneris*) may develop its hair-like stems and tiny leaves. The stout-growing Aspleniums, of which there are so many varieties, may raise their erect fronds from behind stone masses or at the foot of the tree trunks, in fitting association with the Male-ferns (*Aspidium filix mas*), or the broad Buckler (*A. dilatatum*), and space and place may be found, when the rough brambles and coarser grasses are eliminated, for the Oak-fern (*Polypodium dryopteris*), or the

Beech-fern (*P. phegopteris*), or the more common *P. vulgare*.

Yet, further, in some sheltered nook may arise the radiating fronds and central seed-bearing ones of that charming fern from Germany (*Struthiopteris Germanica*), and down a little way, where the oozing water has produced a thoroughly damp place or a little rill, may be planted masses of our own noble Royal-fern (*Osmunda regalis*).

And amongst all these or around them, either advancing into the open places or retiring into the glades amongst the trees, may be planted Foxgloves of various hue—the indigenous red or the cultivated forms of the white. As I have said, the ordinary Foxgloves may spring up unbidden, and if they do not, a sprinkling of the seed on the soft leaf mould or decayed vegetation of former years will soon yield a crop, which will renew itself from year to year in perennial fashion, but the intermixture of the cultivated kinds will do much to enhance the result.

There is a little plant from North America, but which has become naturalized in England, which is very suitable for covering more or less shady places, enriched with decaying matter. It is the *Dicentra eximia*, a diminutive form of the Bleeding-heart, which has graceful, fern-like leaves, amongst which it raises long, drooping racemes of reddish or pinkish blooms, heart-shaped, like those of the

garden variety, *D. spectabilis*. It increases rapidly and colonizes rough places, such as those we are considering, carpeting the ground, and taking the place of the ousted weeds with great advantage.

The family of the Saxifrages yields many varieties which are suitable to rough places, both shady and sunny, both sheltered and exposed. Many are suited only to the rock garden, but of those I do not write, as they are fitted only to more or less dry rock masses, and if overgrown with grasses are quickly destroyed. But of the larger, bolder kinds there are many useful varieties, which are able to hold their own amidst the varied vegetation of rough places.

The old-fashioned *Saxifraga crassifolia*, with its thick, glossy leaves and many panicles of rosy flowers, soon forms dense clumps amid rocks and stones, and the shape and colour of its foliage make a useful contrast to the grasses and slenderer foliaged plants. *S. peltata* (which I have already described), if planted in some moist spot, raises its great shield-shaped leaves well above the lesser herbage into useful prominence.

S. cotyledon, one of the largest of the Saxifrages, is especially useful for its inflorescence, with its tall pyramids of white flowers. It should not be crowded, but rather be planted singly in some conspicuous places, where the beauty of its flowers may be appreciated.

S. longifolia is another flowering species, also white, of conspicuous merit; its leaves are in rosettes, themselves beautiful with silvery dots. It must have a special place, and should be planted rather amidst great stones than in the ground, where it may risk being overgrown.

S. umbrosa, which is known by the name of London Pride, giving it a Cockney association which it little deserves, as it is a native of the mountains of Killarney, is one of the most charming of the smaller species of this family. It throws up many long, slender stems, which are spangled with pretty white, or pinkly spotted flowers in a most elegant manner, while its masses of small, soft oval leaves are themselves beautiful, and if planted on rocks or moss-covered slopes and banks, it adds a charm peculiarly its own.

Where moss can be obtained in any considerable quantity, and it is usually to be found in woods, it is of value for covering masses of stone should they not already be draped by Nature's artistic hand. The rougher the surfaces of the stone, the more easily will the soft mould necessary to the implanting of the moss be retained. If in sufficient amount moss also may be used to take the place of grasses on the banks and between the boles of trees, and if there is sufficient moisture the soft charm of the rich green will be worth the trouble involved. The rarer species of mosses, the Lyco-

podium and the *Selaginella*, may be met with in woods in very damp situations, and they are particularly valuable. In collecting moss the spade should be used, and unbroken masses with the underlying soil should be removed if success is to be insured; for if a mere surface or but broken bits are used, the moss will soon die out. For this reason it is but of little use to strip it from the trunks of trees, unless the bark is removed as well.

I have already described many plants notable for their foliage or flowers, which may be selected for the rougher parts of the garden and for the damper situations, but there are one or two which I think I have not given which it may be useful to mention here.

Acanthus latifolius is, from its grand foliage and remarkable inflorescence, a very distinctive plant, exceedingly well suited to the rougher places, and it may be placed either in shade or in sun, but it flowers best in the latter situation. It has large, deeply-cut, handsome leaves, which soon form most conspicuous clumps, in harmony with the rocks and broken ground, and enhancing their picturesque aspect. Tall stems rise to a height of 3 feet from between the mass of leaves, and bear remarkable tubular-shaped purple flowers, protruding from conspicuous, deeply-incised calyces.

The family of *Achilleas* yields several members of

flowering plants, beautiful in their foliage—which in the foliage is much divided and almost fern-like in aspect—and in their tall heads of abundant flowers. *A. Eupatorium*, from the shores of the Caspian, is a very vigorous plant, yielding numbers of tall stems crowned with flat corymbs of bright yellow flowers, and should be planted in groups. *A. ptarmica* is a British member of the family, and has pure white flower masses, especially the double variety, while its vigorous habit, if it be given good soil, makes it a valuable plant.

As a contrast in colour, the common border plant, the Monk's-hood (*Aconitum napellus*), with its beautiful spikes of deep blue, would be a fit occupant of this part of the garden. There is a Californian species which is a much more vigorous grower, and whose flowers are of a deeper blue, which might with advantage be employed in damp, boggy soil, but care must be taken that it is not crowded out with rank weeds.

And the Larkspurs (*Delphinium*) would be more at home here, perhaps, than in the formal border, where, indeed, they are some of the handsomest of the perennials, only it is necessary to see that good pits be dug in the ground to allow of sufficient well-manured soil to afford sustenance to their roots. There is a wide choice of beautiful colours amongst the recently introduced varieties which may well be used to contrast with the reds

and yellows, whites and purples of the plants which we have discussed.

I have tried more than once to enrich such a part of the wild garden with those beautiful creepers and trailers the large-flowered Clematises, but have failed to a great extent by reason of the depredations of mice and moles; but in places where these enemies do not trouble nothing could add more to the wild beauty of rocks and tree-stumps than by thus covering them with the truly charming forms of the Clematis.

Then, too, the variegated species of Hops afford another element of tangled beauty, which may well be adopted, adding alike form and colour, trailing lines or reticulated mazes amidst the rocks, and sending their climbing sprays up the adjoining bushes and trunks of trees.

XV

WHAT IS BEAUTY?

THE Professor had not yet put in an appearance this afternoon, and I sat smoking the pipe of peace under the grateful shade of the Deodar on the lawn, while all the scene below was flooded with light and with warmth. Not a leaf of the great Copper Beech at the end of the tennis-court on the terrace below stirred in the soft air, and its dark mass of coppery sheen, glinting with points of light, formed a delightful contrast to the depending boughs of the Silver Birch, with their small light-green leaves. Nearer, the warm brown trunk of the Scotch Fir made a new contrast, and yet nearer the rich yellow of the Golden Thuja completed the series of tints, backed beyond with the mass of leafy Chestnuts and the deep shadows between the towering stems of the Larches in the Home Wood.

Far away through the silver haze the range of the distant hills showed blue, and the bosom of the broad river gleamed in the sunlight, speckled

here and there with the sails of the lighter craft, and one big steamer slowly making its way against the retreating tide.

The click of the little iron gate leading into the garden which we call the Rosary, situated behind me and some 10 or 12 feet below, on a terrace of its own, and the soft tread of feet on the gravel of the path, notified that some one or more had entered the little garden, and presently I heard voices proceeding from the occupants of the seat under the Spruce Tree just below, which was shut off from sight from the lawn above by a wall crowned by a square-trimmed hedge of Yew.

‘You have a lovely little garden here,’ said the voice of the Padre; ‘Roses and Lilies, how charmingly the colours contrast, and the scents of the Rose and Lily, though intermingled, are almost distinguishable!’

‘I am glad that you admire my garden, though it be so unlike the Pater’s,’ said she.

‘Both alike are beautiful,’ he replied. ‘What is the charm that lies in beauty? I think that our materialistic friend would find a difficulty in analyzing that, though doubtless he would locate it in some of his many centres. I would prefer what Keats wrote—

“Beauty is truth, truth beauty—that is all
Ye know on earth, and all ye need to know.”’

‘Ah!’ said she,

“Who hath not found how feebly words essay
To fix one spark of Beauty’s heavenly ray?”

‘But we can feel it,’ he said, ‘however impossible to describe it. Who can describe the scent of the Rose or of the Lily? Yet how very real it is!’

‘Is not that making it a matter of sense?’ said she; ‘and would that not lead you rather near the heresies of our materialistic friend?’

‘Are *you* also in the enemies’ camp?’ he cried.

The silvery laugh, which seemed to be a weapon that the daughter of the house had always at command, and which, when wisely used, I knew could be most disconcerting, was her reply. Then she quoted—

“What thin partitions sense from thought divide.”

The laugh and the quotation were too much for the young Padre, and whatever visions he may have formed of a quiet *tête-à-tête* under the influences of Roses and Lilies and their mysterious effluence, they were doomed to be dispelled by the arrival of the Professor and his very audible greeting, which must have disclosed the fact of my proximity to those below, and, as a consequence, a few minutes later the young people joined us on the terrace.

The Professor had heard the rejoinder of the daughter of the house as he came on the scene, and said :

‘Pope had certainly many inspired intuitions, and your quotation was one of his pithy sayings which was probably nearer the truth than even he imagined.’

‘Perhaps you can enlighten us, Professor. We are in doubt as to what constitutes the charm of beauty,’ said the daughter of the house, with a delusive smile at the Padre to disarm the sense of her perfidy.

‘Ah ! now,’ he replied, ‘you have opened up a question the depth of which you hardly comprehend. The sense of beauty is closely allied to the sense of harmony, if they are not both one and indivisible, and both depend on parallelism of sense impressions. Amongst the more recent discoveries of nerve elements which make up the gray matter of the convolutions are the “association centres,” described by Flechsig ; and it seems probable that a series of sense impressions carried up to the sensorium are presented to these association centres, and if they reach them in harmonious parallelism they give rise to a sense of the beautiful, but if there be any jarring notes, so to speak, which impinge on the parallelism, they render the harmony incomplete and the sense of beauty imperfect. But this, of

course, is not the whole matter. The impressions thus associated must be converted into thought.'

'Just so,' interpolated the Padre, filching an irritating expression of the Professor's.

'And this conversion,' continued the Professor, ignoring the interruption, 'is as material a process as the conduction of impressions. In the gray matter of the convolutions are thousands of millions of little nerve systems, each complete in itself, consisting of a nerve-cell termed a "neuron," from which arise processes termed "dendrons"; these divide into smaller branches, called "dendrites," and these are provided with little buds, or gemmules, which are capable of extension and contraction like the horns of a snail, as they consist of living protoplasm. It is believed that the dendrites are covered with a sheath, through the openings in which the gemmules penetrate, and at the tips of these gemmules is naked protoplasm. Now, as these dendrons stand up in parallel lines they are contiguous to other dendrons issuing from other nerve-cells (neurons), and in the flow of thought their gemmules approach each other by elongation, and nerve force, leaping across the infinitesimal space, is communicable. In sleep these gemmules contract and disappear, and even after long-continued mental effort they diminish greatly in size. You can perhaps now conceive how a series of harmonious impressions or excita-

tions may pass in parallel lines, and thus finding their way to a series of dendritic processes meet harmoniously in the transmission through contiguous gemmules, and produce the sensation of harmony or beauty.'

'I fail to see anything but an ingenious theory, not to call it something worse,' said the Padre.

The daughter of the house, meanwhile, having handed over her friend to be tortured by the materialistic dogmas of the Professor, had disappeared, and the Padre, in some dudgeon, also walked away.

A pipe is a great friend and coadjutor when one wishes to look wise and keep silent. You have only to smoke on quietly, and pretend that you have enough to occupy your thoughts without the need of speaking; but when we were alone I said :

'But surely, Professor, you do not wish me to believe that all you have said has been scientifically demonstrated ?'

'Well,' he replied, 'with you I will confess that although the anatomical statements are facts, I have used them in a way not perhaps absolutely sustainable—I mean that my use of them is to some extent theoretical. While, on the one hand, the Padre looks upon thought as somehow associated with the nebulous idea of the soul and as

unconnected with the material body—which, of course, is absurd—I, on the other, confess that, although science demonstrates that as a result of material impressions thought is a function of brain matter, I must allow that in the present condition of the science of psychology it is not yet absolutely clear how these impressions are converted into thought.'

'At any rate,' said I, 'although your theory may not too clearly elucidate the psychological origin of the sense of beauty, and it may be difficult to decide what this delightful sense really is, there can be no doubt of the potent influence which the appreciation of beauty has played in the rôle of life throughout the whole animal creation, and especially in man. In tragedy or comedy throughout his history beauty has dominated the show, and its influence has created many indeed of the serious complications of life, political and domestic. Well wrote Emerson :

“Till dangerous Beauty came at last,
Till Beauty came to snap all bonds,
And drown the memory of the past
With Lotus wine.”

'But is not the poetical sense deeply allied to the sense of the beautiful, and do they not individually include both the emotional and intellectual sides?' I asked.

'Most assuredly,' he answered. 'There can be

no true poetry without the highest action of both sides of the cerebrum, or systems of cerebral action; and, as I have before intimated, they are associated only in specially constituted brains, whence the true poet, not merely the rhymester. I was amused lately by the editor of the *Daily News* dissecting in a leading article the elaborately confused attempt of Mr. Holmes to define, in an essay of his, "What is Poetry?" But, as you suggested, the rhythm of poetry, coupled with appropriate word selection, and stimulating a correlative outflow of emotion, is closely allied to the stimulation of the sense of beauty and the sense of harmony—indeed, directly conducing to these senses, and consequently giving rise to pleasure as a sense of beauty does, and probably stimulating the same sense centres. But in the writer of the poetry the emotional side is first in action, and the intellectual side is stimulated to the highest effort; in the reader the reverse is the case.'

'Then, may I paraphrase it thus?' I suggested: 'Poetry is the harmony of expression of the deeper feeling of the emotional side, which constitutes that touch of Nature that makes the world akin.'

'If you don't want a clearer psychologico-physiological explanation that may serve,' said the Professor.

But just now the paraphernalia of five o'clock tea was being laid out under the shadow of the tree near us, and the sounds of the musical gong were heard announcing the completion of the arrangements.

In a few minutes the members of the family gathered round the table, and the daughter of the house assumed her position as dispenser of the cup, while from a distance the Padre approached and completed the circle.

'What has become of the Gunner?' asked the Mater.

'We saw him walking down the meadow with the fish-creel on his shoulder and his rod,' replied the daughter of the house.

'Two is company and three is none,' said the Professor oracularly.

'Is that because a sense of parallelism is more difficult with three than with two? or are there difficulties about the dendritic processes?' asked the daughter of the house, with a faint laugh.

'Most certainly the sense of harmony is more difficult under such conditions,' he replied.

"Whatever sceptic could inquire for,
For every why he had a wherefore,"

quoted the Padre.

But the Mater was uneasy at the tone of things in general, and perhaps sympathized with the

Padre in that feminine way which is so charming with the sex when they instinctively take the weaker side, or, at any rate, the aggrieved side, and she carried him off to show him her last brood of silver-plumaged turkeys.

XVI

THE WILD GARDEN IN SEPTEMBER

THE bounteous subtropical summer of this year (1899) has been very kind to the subtropical wild garden, aided as it has been by the almost equal warmth of the last year, and the heat-loving plants have benefited greatly. Not that they would have done well in the want of the usual rain had they not had a plenteous supply of water as well. Happily, there is no scarcity of this here, and by aid of irrigation, the hose, and the hand-bucket, they have had all that they needed.

As we enter the little gate beneath a great Pine, the big hardy Fuchsia to the right is a blaze of scarlet. I have cut it down three years running, but this year it has grown luxuriantly, and is some 8 or 9 feet high, and many more in circumference round the top branches. Its big stems, 2 inches in diameter, are shedding their bark like the Plane-trees in the London parks, while the long branches are covered with their scarlet flowers to their

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extreme points. Certainly this is just the plant for a corner of the wild garden.

The Medlar-tree on the left is laden with fruit, beloved by those who appreciate it, and hated by those who have not learned to do so, while further up the steeply-rising bank the stately *Spirea Lindleyana* is waving its long plumes of spent flowers, some 10 or 12 feet high, in the soft breeze. Higher up yet on the bank the clumps of the *Polygonum Sieboldi* are holding high overhead their long sprays of heart-shaped leaves with myriads of tiny racemes of white flowerets on both upper and lower surfaces of the stems.

As a contrast below are the great clumps of *Rheum*, with their spent flower-stalks, 8 or 9 feet high, rising from the centre of the radiating stems of their huge leaves, which have not yet turned brown. Masses of Ferns and stray bushes of Gorse, which I have not yet eradicated wholly, cover the rough ground, while clumps of bright yellow Michaelmas Daisies fill in the spaces behind the Rhododendrons. Just in front, overhanging the path, is a bright patch of blue and yellow. The blue of the richest tint of that incomparable colour is due to the long sprays, from 2 to 3 feet, of an Alpine Gentian, which a kind friend sent me direct from Switzerland, and which has found a home that it likes in this spot, while the yellow is given by a spreading Labiate plant sent at the

same time, *Salvia*-like in shape of flower, and as hardy as might be expected from such a habitat.

But the Bamboos on the right, covering the slope to the lower pond (the water of which is raised a foot or two by a bund cutting it off from the long pond, which runs to the border of the garden to the south to hold the coloured Water-lilies), are just now my chief pride and a source of some little anxiety, lest in this capricious climate we may suffer from an early frost, for this year they have sent up shoots of unusual height, and are not yet sufficiently hardened or developed to bear so unkind a cut.

Of course, the great clump of *Bambusa Métaké*, which is 18 feet high and 23 feet in circumference, may take care of itself, and the *B. mitis*, a few feet lower in height, is sufficiently hardy to stand most weathers, but the *B. erecta* is the one for which I chiefly fear. This charming Bamboo for several years after planting would not grow more than 4 or 5 feet, and its tender stems were not much larger than a pencil; but last year (1898) it had obtained sufficient foothold to begin its higher development, and afforded me shoots 12 feet in height, one of which was caught by the frost, as they came up late in the summer. This summer, however, they shot up much earlier, and aided by plenteous watering and some occasional stimulant, they grew splendidly, and are now 17 feet in

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height, and the culms are beginning to throw out their side-shoots. The rate at which they grew was prodigious—7, 8, and 9 inches a day at their earliest stages, and if I returned to measure them after an hour or two of absence, the increase in that short time was quite apparent.

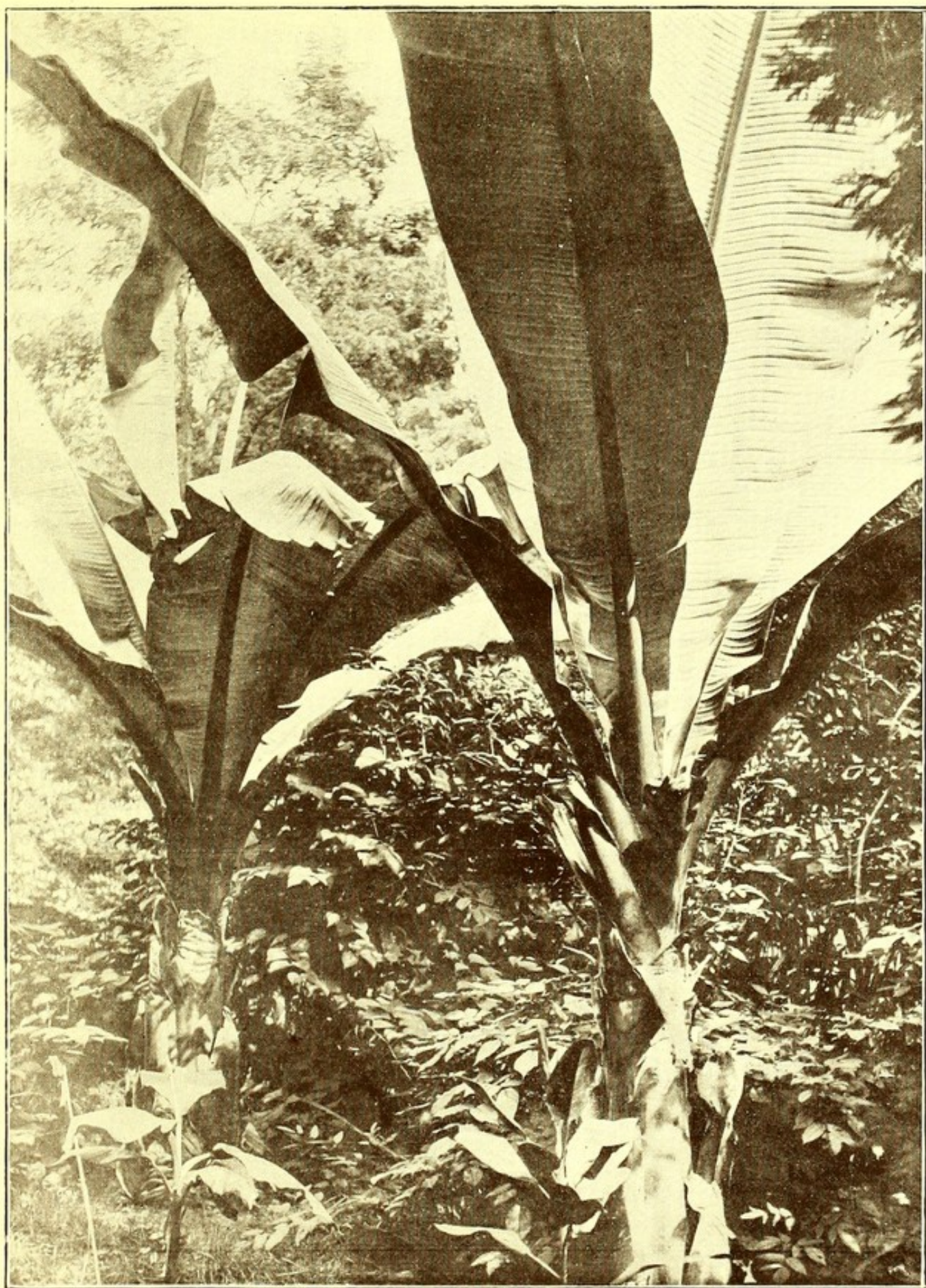
The clumps of *Phyllonichys Quillioi*, one of the most graceful of the order, with their long side and terminal branches closely set with small, bright-green leaves, always swaying in the faintest breeze, have beaten in growth even the *Erecta*. They had slightly the start to begin with, and grew as rapidly, and are now not far short of 20 feet. They have liked the position, sheltered from cold winds, and exposed to the southern sun, with rich, damp soil, and ever since a few years ago, when I brought them from the Riviera, they have fully repaid the trouble, and always yielded me a source of pleasure.

Further down, the long pond is overshadowed by the branches of four different species of *Polygonum*. The great *P. Sacchaliense*, which comes from that far-off island of sorrow, Saghalien, the convict station of Russia on the Pacific coast of Siberia, is most conspicuous, especially the male plant (which I have just heard is not possessed at Kew). This great plant, which throws up its hollow, jointed stems some 12 or 14 feet, carries its *erect* racemes of whitish flowerets on the upper

side only, and it is just now in full flower, and covering a space by its overarching branches of 15 feet by 12, while on the opposite side the female plant of the same species, with its drooping flower clusters, is almost as large, while further on the *P. Sieboldi* and *P. amplexicaule* filling up the spaces, aided by intermediate clumps of Bamboo, are all reflected in the still water of the pond.

Looking up the path leading to the higher pond, the stately fronds of the Abyssinian Musa (Banana) are glancing in the sunshine, and throwing deep shadows over the grass and the path below. These again are some of the proudest products of the subtropical garden. I have seldom met with grander specimens of the Banana even in India. The great fronds measure from 12 to 14 feet in length and $2\frac{3}{4}$ feet in width, and rise from the pedestal of the main stalk at a height of 4 feet from the ground, so that they tower overhead to a total height of 18 feet, and are almost without a rent.

I measured the circumference of the base of one of them just now, and found it to be 5 feet 8 inches. These have been growing in this garden about nine years, and the difficulty of taking them up in the autumn and replacing them in the spring has grown to be one of some magnitude, for the ball of earth and the plant together weigh about 14 cwt. It requires six men to lift them and



MUSA ENSETE (LIGHT AND SHADE).

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a team of horses to drag them up to the glass houses, and the further difficulty of setting them in their winter places is not slight. To what they will grow in a few years is not easy to say.

There are other smaller and younger plants, about the size of those usually seen in the parks, but these give no trouble in comparison.

I have lately acquired a new species of Banana from the Riviera, *Musa Sinensis*, which comes from China, as its name indicates, of a different habit. It is but a young plant yet, but I find that instead of all the leaves springing from the same crest, they have a sort of internode between the base of each, so that the plant will differ from the other species when grown. Moreover, it has a singular enhancement of beauty in bars of purple brown on its leaves. My plant is too young to show them very distinctly yet, but the promise is there. It is planted amongst the subtropical plants above the middle pond. Just beyond the big Musas is a Palm (*Chæmerops excelsa*) which has been planted out permanently some four years or so, and is now growing rapidly, and with the recent mild winters has not suffered at all. Its fronds now measure 7 feet along the upper circumference of the fan, and each succeeding frond is more spreading than its predecessor. Like all the Palms, the fronds when first formed have no stalk, but as they spread into the fan shape, the stalk is developed until it

reaches 2 feet in length, and lifts the fan into its place. I have two other species of *Chæmerops*, *Fortunei* and *humilis*, which I have planted out this year—one in a sheltered little dell sloping to the middle pond, where I hope that it may find sufficient protection, and the other in a more exposed position. But let us hope that we may have a mild winter.

Near the first Palm as we go up the path is a clump of the New Zealand Flax (*Phormium tenax*), which, although it grows almost as luxuriantly as in the Riviera, does not flower here, even with an almost subtropical summer.

Near it is a group of the *Agapanthus* raising its fine heads of blue lily-like flowers. It is quite hardy here, although it seldom attains the same bulk as those grown in the green-house.

Overtopping even the leaves of the great Banana rise the branches of a variegated Maple, which make a bright background for the huge leaves of the former when viewed against the sun. Further up towers a Deodar, planted by my kind predecessor of sixty years ago, and as its roots can reach the water of the upper pond, it has grown almost as well as on the heights of the far-off Himalayas, and fronting it, on the slope to the middle pond, there is a collection of interesting plants. The *Arundo conspicua*, which most visitors think to be a Pampas Grass, but which belongs to

quite a different family in New Zealand, raises a dozen high stalks, each crowned with a silky plume, which it sent up to wave in the breezes of July last. By its side is its near relative, the *Arundo donex*, from the shores of the Mediterranean, whose foliage is striped green and yellow. Then in the midst comes the queen of all the Cannas, the *Canna Ehemanni*, with its broad, green, shining leaves and tall stem surmounted by its arching head of flowers of the purest rose colour. Some years ago I obtained this from New York, and although I have seen it named in books on Gardening, I have never seen it in any English price-list; yet it is the chief among the Cannas.

Behind it rises a clump of the yellow-barred *Eulalia*, ever graceful, tall and elegant, a charming plant for a nook of this kind; and below all these, near the margin of the pond, is one of the largest-leaved terrestrial plants, the gigantic *Gunnera manicata*, from South America. I planted it in a pit dug some 4 feet deep and 6 feet long, and filled with rich soil so that its roots could get the water oozing through the bank from the pond, over which its huge leaves depend. Some of its leaves are 5 or 6 feet wide and as many long, and are sometimes larger, and borne on stout, prickly stalks about 5 feet in length. Its mode of flowering is peculiar. It throws up a long, spike-shaped cone, about 2 feet high, covered

all over with small spikelets, on which are set myriads of small inconspicuous flowers. The plant dies down in the winter, and needs some protection ; but it is very sheltered here, though exposed to the sun, and does better than a sister plant, the *Gunnera scabra*, which is planted on the other side of the pond fronting the east.

Passing under the spreading branches of the Deodar, we reach the upper pond, bordered on all sides by high trees, conspicuous amongst which is a grand old Pine (*P. excelsa*), covering with its branches 140 square yards of ground, while on the island in the centre of the pond are other species of Conifers—the *Wellingtonia* from California, the Arctic Thuja (*T. borientalis*), the *Picea Nordmannia*, and the smooth foliaged Japanese Pine, and on the bank on the right rises a fine specimen of the Chilian Pine (*Aurocaria*). As we pass along the bank we get a view over the whole lower lying garden, and especially of the part flanking the middle pond, in which is planted the greater collection of flowering shrubs and exotic plants.

The delicate foliaged *Bambusa gracilis* lies in a little hollow on the edge of a pool filled with water - plants and damp - loving things. The *Lythrum roseum superbum*, at the head of the pool, has already yielded its rose-coloured inflorescence, and, indeed, at this season of the

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year the only bright spots are the masses of Canna, the groups of *Lilium auratum*, the tall forms of the inimitable *Canna Ehemanni*, some groups of *Kniphofia*, the giant red-flowered Tobacco, and patches of orange-coloured *Rudbeckia*, and the fading blue trusses of *Hydrangea*.

But here are placed the various flowering shrubs from many quarters of the globe which I have described as flowering in the earlier months of the year, protected by a high bank of Rhododendrons on the side toward the wood, and bordered on the pond side by a stretch of Azaleas, which soon will give a mass of colour as their leaves turn orange in the advanced autumn. The colour in the upper part of the garden to the north of the big pond is yielded just now chiefly by the Californian *Solidago*, which likes boggy ground, and the superbly coloured *Lobelia cardinalis*, which also likes moisture, and some patches of Michaelmas Daisies on the bank beneath the wood, which shuts in the garden on the north and west.

XVII

THE WATER-GARDEN

THERE are many plants that are true aquatics, and some of them are amongst the most charming flowers of the garden. All have graceful forms, and some are gems of colour. And the setting of these gems is not the dry, brown earth nor the quiet green of grass, but the translucent water, whose surface reflects the flashes of the sunlight or the deep, calm blue of the sky.

Then, too, comes the framing of the picture as seen before us—the border of broad green leaves of the Coltsfoot (*Tussilago*), or of the Butterber (*Petasites vulgaris*), or of the Winter Heliotrope (*P. fragrans*), or of the spear-like shafts of the Iris, or the Bulrush, and the arching stems of the Solomon's Seal (*Polygonatum*)—all reflected in the mirror of the surface, spangled here and there between the leafy reflections with the pure white images of the bells of the latter graceful plant, or the equally gleaming white of the triple petals

of the *Trillium* (the Trinity flower); while in the background rise the tapering stems and graceful plumes of the various species of Bamboo.

Thus the material of the setting and the framework of the picture combine to render the water-garden something unique and self-contained, and altogether appropriate to the chaste beauty of the plants enshrined therein.

And what flowering plants can be more beautiful in form and hue than the Water-lily, whether it be the pure white, or the richly golden, or the gorgeous red, with their leaves floating, heart-shaped or oval, on the placid surface, and the charming flowers just rising amidst their circular grouping, and reflected petal for petal on the glassy face?

There are several white Water-lilies, old and new, and the indigenous one, *Nymphaea alba*, is not the least in value, nor to be slighted because it is an old friend. Its only fault is that it is too generous, and its tendency to increase must be curtailed, for if allowed to unduly crowd itself, it loses much of its charms. Yet this tendency to increase may be turned to account. I find that I can realize a guinea a year from one pond alone by judicious thinning out and sending the well-grown roots to the nurseryman, who retails them at double the price that he gives me, and thus the increase affords me the means of adding one or

more of the expensive species annually to my collection. This is prosaic, but useful.

The other indigenous Water-lily is the yellow (*Nuphar lutea*), whose golden chalices glisten like huge Buttercups, and rise somewhat higher above the water that reflects them. This has not the same tendency to rapid multiplication, and least of all have the rarer kinds of exotic Water-lilies—more is the pity, for in my experience, although the latter are healthy and strong as a rule, I have gained no increase and have lost some.

There are several varieties of the white which are not indigenous, and many of them have especial claims. The North American *N. odorata* is larger and, perhaps, handsomer than ours, and is sweetly scented, thus adding another charm. Moreover, this species flowers longer than ours, as, indeed, do all the exotic kinds, lasting well into the autumn, while our own flowers for a few weeks only, and persistent flowering adds greatly to their value. Then, amongst the American kinds there are double whites, both large and small, so that quite a collection of white Water-lilies may be formed.

Of the yellow flowered there are also several varieties—*Nymphaea odorata sulphurea*, *N. flava*, and *N. Mexicana*. But the gems of the whole family are afforded by the Hybrids which M. Marliac has given us. Of these, *N. Leydeckerii* is one of the

most beautiful, and quite hardy so far as my experience goes. The flowers at their first opening are of a soft rose colour, which goes on deepening until it becomes a deep blood red, and thus it lasts for several days. Successive buds rise to the surface and undergo the same changes, and as the plant is a prolific flowering one, the succession is kept up for several months—indeed, well into the autumn, long after the common White Lily has ceased to flower. It was very expensive when first brought out, but is now within the reach of most amateurs. *N. Marliacea* is still cheaper, and is very charming. The flowers are large and of a pale yellow colour, and the leaves are enriched with marblings of purple. *N. Marliacea albida* is a pure white and of great size, sometimes measuring 7 inches across—a magnificent flower. *N. Marliacea carnea* is nearly allied to it, and has flesh-coloured flowers. Lastly, there is *N. M. rosea*, with flowers of a rosy pink.

There are still other rarer kinds which are not easy to obtain, some with many petals, richly marbled with colour or with petals green behind, and edged with rose and pink in front.

In a recent list sent me I find still others, varying in price from fifteen to thirty-five shillings per root, but I prefer to speak of those I have tested and found to be truly charming.

In planting these Water-lilies there is no

difficulty if there is a layer of soft mud at the bottom of the pond. The best plan, I think, is to bind up the roots with old matting, or sacking, with a moderate quantity of soft mould, and drop the bundle into the water, which should be about 2 feet in depth, and gently press the plant with a spade into the mud. The matting soon rots away and gives the new roots freedom to enter the soft soil below.

I have never lost a plant well and carefully planted (with one exception), but care should be taken not to crowd them, for they increase greatly in size, each plant spreading its leaves some 3 feet in every direction from the centre, and great care should be taken to prevent their being overgrown with water weeds. If possible, choose a sunny spot, for the flowers will not open properly in the shade, and when the afternoon sun is shut off they close too early. For a single plant a very small pond suffices, and they have been grown satisfactorily in tubs sunk into the soil.

Where there are wild duck it is necessary to run a fence of wire-netting around the plants, or the beautiful flowers will be defaced by the ducks, who are enemies of all water plants.

I can hardly say too much in praise of these beautiful plants, which render a pond in the wild garden doubly valuable, and enhance the beauty of the spot to a great degree.

It is most interesting to note the important part that the Water-lily, under the name of the Lotus, has played in the ancient symbolism of the earliest civilized races of the world—at least of the Eastern world.

It first originated in ancient Egypt, and shortly after in Asia, and spread over the whole of the old world, including all the historic nations—Chaldeans, Assyrians, Babylonians, Phœnicians—and the prehistoric Greeks, while by the spread of Buddhism in more recent ages it has pervaded India, Thibet, and China.

In Ancient Egypt it symbolized the solar renaissance and the eternal and unceasing recrudescence of life. In it they saw the symbol of the daily submergence of the sun, and believed it to represent the mysterious matrix from which he obtained the virtue of the new life with which he sprang each morning into a new activity, and filled the world with life.

In Ancient India, in the earliest times of which there are any records, the great creator Brahma is represented as springing from a golden Lotus in the beginning of time, and from the various parts of the flower creating the world; and the sign is unceasingly employed to interpret every shade of thought in subtle solar symbolism.

The Buddhists some 2,400 years ago adopted it as the 'flower of life,' to symbolize the eternal

active force and the innumerable worlds that fill space and the Buddha dwelling in each of them. Buddha is universally represented as seated on the Lotus-flower, and the symbol is everywhere used to distinguish the sacred vessels dedicated to the service of the Great Teacher of everlasting and eternal peace; and in Thibet and the furthest valleys of the Himalayas the symbol is used in conjunction with the motto, 'Om mane padmi' (Oh, the jewel in the Lotus), having the esoteric meaning of an invocation of the spirit of perfect peace set in the casket of the flower. This is inscribed or sculptured on the series of altar-like structures on the thoroughfares leading to the towns, and is used as an utterance of sanctification and of welcome to all comers.

The symbol is met with on the monuments of Phœnicia, and on those of the eighth century before Christ of Assyria and Persia. In the sculptures of Phœnicia goddesses are found holding in the hand a Lotus-flower, and in the Sassanian bas-reliefs at Tagh-i-Bostan the solar god Mithras stands upon a Lotus. And in Mesopotamia and Persia sculptures are found in which the Lotus is depicted blossoming on a shrub symbolizing the Sacred Tree of the Semitic religion, the tree which secretes the elixir of immortality.

In the Assyrian sculptures the god Assur holds in his right hand a Lotus-flower. It everywhere

represents the flower of life, and typifies immortality, and as such was adopted in a far later age in the funeral symbolism of Europe.

It is found, too, mixed up and associated with other esoteric symbols of many ancient nations, and was at times used as a variant. Thus, with the very ancient sign of the Trisula (which reappears in the modern form of the trident), the terminals of the Trisula are indicated in the perfect representation of a half-closed flower.

The old Greeks had a myth relating to the Lotophagi, who were supposed to partake of the Lotus in order to forget life and its troubles.

So widely known a symbol and so chaste a flower-shape was likely to lend itself to architectural embellishment, and we consequently find it on the sculptured columns of ancient Egypt and Greece. In the magnificent temple at Karnac, which presents the finest example of sculptured columns, the capitals are bell-shaped, and represent most clearly and artistically the Lotus-flower; and in the temple of Medinet Habu it is the base of the column which represents the flower, from the half-open chalice of which the column rises.

In the palace of the Tiryns, representing the prehistoric architecture of Greece, there is a beautiful frieze of alabaster, on which is depicted in relief a series of very perfect reproductions of the open Lotus-flower.

Surely no single flower of our gardens has ever had this world-wide renown, in an esoteric sense, except the Lotus, or had its petals chiselled so universally on the enduring monuments of the world. The only exception that I remember—and this in a far subsidiary degree—is the Acanthus, whose leaves are reproduced on the capitals of the Corinthian style.

There are many other aquatic plants that may be added to the ponds if there be sufficient space.

Orontium aquaticum is a plant of the Arum family, with yellow flowers raised out of the water—which should be shallow—on tall spadices, and with large, bold leaves with iridescent lustre. It is a native of North America.

Peltandra Virginica, from the same country, is also of the Arum family; it has broad, handsome leaves, and raises its flowers well out of the water.

Pontederia cordata is, perhaps, better than the former, with long, arrow-shaped leaves some 2 feet in height, and tall spikes of blue flowers. It is also a native of North America.

Ranunculus aquaticus rises boldly from the water to a height of 3 feet, and has brilliant yellow flowers of the Buttercup species. There is a choice variety named *R. aquaticus lingua grandiflora*, which should be the one chosen.

The common English *Sagittaria* is quite handsome enough to be placed in our ponds. It is

known as the Arrowhead. Its leaves resemble closely those of the Nile Arum, and it carries its white flower on a tall spike. The Japanese variety (*S. Japonica*) has double flowers, but I prefer the English plant.

The Cape Pond-weed (*Aponogeton distachion*) is a worthy occupant of the pond, and likes deeper water ; it is quite hardy in this part of England. It would increase were it not for the ducks, who are exceedingly fond of it. One of its charms is the long period of its flowering—from spring well into the winter. It opens its beautifully scented white flowers on two tiny branches in a valve-like manner, and they last well. Its leaves are ovoid in shape, one or two on the points of the long stems that rise through the water, on which the leaves float. When planting, in water about 3 feet deep, it should be treated in the manner given for planting Water-lilies.

Acorus Japonicus variegatus is a variety of the Sweet-flag ; its leaves are striped with white. It should be planted on the margin of the water, where from its variegation it is a pleasing contrast to other water plants.

Alisma plantago, a variety of the Water Plantain, has broad foliage and pink flowers. It, too, is a water-side plant, and worth growing where space can be afforded.

Butomus umbellatus, known as the Flowering

Rush, is a native plant worth cultivating. It has rush-like leaves and a tall stem, bearing an umbel of blue flowers, small but pretty. It is easily or cheaply obtained, and when in sufficient numbers produces good effects. It may be planted in shallow water or in mud.

Cyperus longus is another mud or water plant, bearing umbels of small chestnut-coloured flowers, and a tuft of long, narrow leaves given off just below them, and borne on tall triangular stems.

Menyanthes trifoliata (the English Buck-bean) is a more important water plant. Its long rooting stems float deep in the water, and give off ovoid, thick, rather leathery, dark green leaves in groups of three, which in a short time spread far into the pond, and the submerged root-stalks give off at intervals stems which bear racemes of flowers, white tinged with pink; each little blossom is fringed, and carries a fragrant scent. It is easily increased by burying sections of the stem in the mud.

But one of the handsomest plants that may be grown in water (after the Water-lily) is the Arum Lily (*Calla Ethiopica*), which is so generally confined to pot culture, and is relegated to the green-house or conservatory. Yet if planted a foot or more in water it is secure from injury by frost, and with its fine leaves rising well above it and its noble flower crowning them, and both reflected in the

mirror of the water, it forms a delightful picture. If a group of these are thus planted they multiply in a few years, and rival the Water-lilies in effect. It seems strange that this experiment is so rarely tried, for it is attended with no difficulty and with but very trifling cost.

There are a vast number of plants which do well in marshy or boggy places; many of them I have already mentioned when writing of the hardier exotics. They include nearly all the Spireas, Funkias, and Hemerocallis, and many others.

But I think that there are some which I have not included, and I may briefly mention them.

Aconitum Californicum is a member of a well-known class of beautiful plants which are usually found in the flower-border, but this one likes marshy soil. Its flowers are deeply blue, and are carried on stems some four or more feet in height. And there is another species with buff-coloured flowers, which grows even a foot or two higher, *A. ochranthum*.

Inula Helenium, the Elecampane, with its broad leaves and heads of yellow flowers, about 3 or 4 feet high, is a good plant for the background, or mixed with other large-leaved plants.

Many of the Iris tribe love moisture, and the common Yellow Flag grows well in a foot of water. And the Lilies, as I have already stated, yield some that thrive best in bog.

The *Lychnis Chacedonica* does nowhere so well as in boggy ground, where it attains a height at least twice as great as in the border. The *Mimulus*, if planted by the water side, spreads down to the brink in wild profusion, and sends its branches even over the surface of the water, looking a very different plant from that found in the border.

Saxifraga peltata, with its great shield-shaped leaves, is a very ornamental addition to water-side plants, and many others of this family like the same position. *Solidago*, the Golden Rod, attains its fairest size and development in such a situation, and all the varieties of the Globe Flower (*Trollius*) yield their rich yellow blossoms best in boggy ground. The glorious *Lobelia Cardinalis* is a bog plant which carries a tall spike of flowers of the richest colour known amongst plants, the Cardinal Scarlet. And, lastly, I would conclude (lest I be tempted to extend this list too far) with two or three essentially bog plants.

Cypripedium spectabile, *C. Californicum*, and *C. acaule*, all species of ground Orchids (Lady's Slipper), deserve a place in the wild garden. And, lastly, a damp spot may be found for that strange floral production, so tropic-like in form, though it comes from North America, *Darlingtonia Californica*. It is a Pitcher-plant, the hollow, tube-like leaves rising from 18 inches to 2 feet in height, and then forming a hood with two long,

depending lips. The membrane of the hood is marked with purple network, and the colouring and form of the whole plant are remarkable. It should be planted in soft, friable, peaty earth, mixed with chopped sphagnum moss, and during the coldest months be protected with a heap of dead leaves.

XVIII

THE SPECIAL CLAIMS OF THE WILD GARDEN

THERE are few who visit me who are not impressed with the beauty and interest which a wild garden affords as compared with the ordinary garden, with its laid-out beds of annuals or perennials. There is certainly a charm in picturesque effect and freedom from all constraint which such a system insures.

The presence of stately trees, the charm of water, and the luxuriance of large foliaged plants, united with the colouring of the flowers, yield a picture which appeals to every eye; while the contrast of colours afforded by the dissimilar tints of the Coniferæ and shrubs, which find a fit place amidst the flowering plants and the broken outlines given by the varying heights of the shrubs and trees, relieves the general effect from all feeling of sameness and tameness which, by comparison, the ordinary garden is not free from.

It is for this reason that I have advocated the



THE LUXURIANCE OF LARGE-FOLIAGED PLANTS.

use of plants with striking foliage and great dissimilarity of form, which alone combine to produce broad results; and the very nature of the wild garden renders the intermixture of shrubs with flowers a natural consequence—nay, an essential demand. Amidst the beds, whether small or large, of the ordinary garden this is inconvenient, and with laid-out beds of any sort the use of plants of unusual size is contra-indicated and embarrassing; yet large foliaged plants, raising their graceful or massive foliage far above the ordinary level, give an effect of freedom and luxuriance which nothing else can rival.

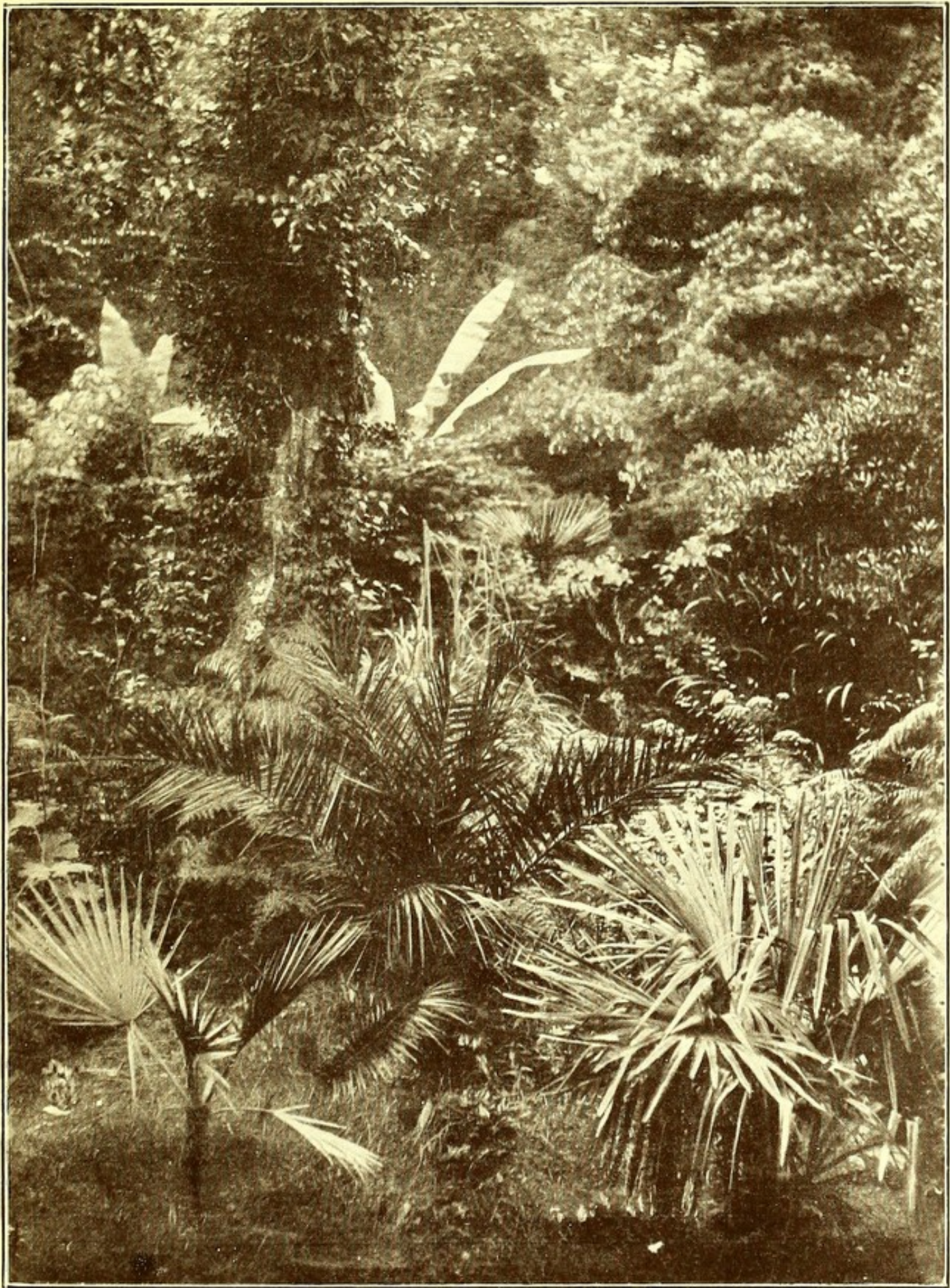
The various species of Conifers afford materials for use in contrast of colour and of form, and their mere formality of outline is no drawback, but rather the contrary, for it lends to contrast, and accentuates the charm of the spreading freedom of other more graceful forms of foliage. The dark green of the *Retinosporas*, with their compact habit, yield a pleasant contrast to the tints of the golden *Thujas*. The wide-spreading, almost naked limbs of the *Araucaria* contrast most efficiently with the massive forms of the dark green Yew, the softer texture and rich bronzy red of the *Cryptomeria* with the geometric regularity and brighter tints of the Silver Pine, the towering height of the *Wellingtonia* with the more diminutive form of the Cypress, and the extending branches of the *Pinus*

excelsa with the compact foliage of the Arctic *Thujopsis*.

Then, again, the various species of Maples (which I have mentioned elsewhere) yield the strongest contrasts of colour—green and white, pure white, rich red, and dark purple—and these judiciously placed are themselves sources of colour with the broadest effects, which mere flowering plants can hardly supply.

As regards variety of form, the many families of plants which I have described and advocated yield the widest contrasts, accentuating the peculiar beauty of outline possessed by each other. The enormous yet most symmetrically outlined leaves of the *Gunnera* render more sylph-like the slender, gracefully arching foliage of the *Eulalia* in its proximity. The shield-shaped leaves of the *Peltandra* or of the great Saxifrage increase the effect of the spear-like stems and long, narrow leaves of the Bulrush on the bank of the pond, and the high, gracefully swaying fronds of the Bamboos accentuate the charm of the placid, oval-outlined leaves of the Water-lilies at their feet, while above all may tower the great leaves of the Abyssinian *Musa*, different alike in form and hue.

These are but a fraction of the effects to be obtained in the untrammelled constitution of the wild garden, and no other will easily admit of such an arrangement.



A CORNER OF THE WILD GARDEN.

And all this is aided and increased by the natural essentials of the site; its absence of formality; its natural freedom from restraint; the broken and uneven formation of the ground; the diversity afforded in the sky-reflected and tree-mirrored surface of the water; the free-growing, unmown stretches of grass, with the background of forest-trees encircling and forming the framework of the picture.

There is interest here which never flags, no presence of a monotony which tires, no necessity for the constant use of the lawn-mower to insure the requisite neatness which a formal garden demands, or the planting-out of beds of annuals. Summer and spring, autumn and even winter, produce their own especial interests, though, indeed, the rich, hot summer—even the almost subtropical summer of the past year—enriches its glories and enhances its effects of colour and form, and presents the garden in its greatest beauty. And while under such conditions the laid-out garden flags and droops from want of moisture, the wild garden and its denizens glow and luxuriate under the hot sun.

It has been a contrast and a relief this past summer to leave the sun-dried Rosary or the heat-smitten *parterre* and wander amidst the deep shade or light-enhanced colour in the wild garden, and to watch the rapid growth of luxuriance which the

unusual temperature has caused in the sun-loving exotics, the richly flowering and luxuriant leaved Cannas, the rapid-growing, towering shoots of the Bamboos, or the truly grand leaves of the Banana, ever increasing in height and width in the still, hot atmosphere of the season.

Would that we could always have such seasons ! They would never dry up our hopes or dissipate our expectations in the subtropical wild garden as they may in the flower-garden proper, but give a fuller development and a richer consummation of all that we desire in this most charming of Nature's gifts, the subtropical wild garden.

XIX

THE DISMANTLING OF THE WILD GARDEN

ALL things have a termination—in some cases permanent, in others, happily, but of the nature of an interregnum, and it is of this latter form of ending that I need here write. When the summer, with all its glory of warmth and light, is over, and the shortening days and chilly nights warn us that at any time when the radiation from the earth by reason of unusually clear skies and absence of wind is suddenly increased the risk of a sharp frost is imminent, it becomes necessary to dismantle the garden of some of its more tender exotics.

Amongst the first to be taken up is the beautiful Tree-fern, the *Alsophila*, for it would be a pity to lose its latest and richest fronds, which, as the most tender, are likely to be the first to be injured.

Then the *Heydichiums*, which late in the year are still throwing up new shoots to become the flower-bearers of the succeeding season, should

follow; for although with an ordinary winter the plant will survive, although cut down, if duly protected with a little mound of ashes, yet it throws up its new shoots so late in the following season that they do not elaborate their grand heads of flowers soon enough in the summer to be of any value.

The *Grevillia*, with its fern-like sprays of leaves, would be killed outright if left to the tender mercies of the frost.

Aralia papyracea, one of the three of the family I have previously described as planted out in this garden, has too tender and delicate foliage to withstand much cold; but of the others, *A. Sieboldi* will bear an ordinary winter if protected with dried fern, while *A. Cashmeriensis* dies down and reappears in the spring.

The new *Senecio* (Arborea), of the hardness of which I hazarded a guess, is, I find, too tender to stand the frost uninjured, and I have brought it up to the glass houses. It is too handsome a plant to risk, and with the first slight frost I found its tender new leaves just touched.

The *Brugmansia* we all know is not a hardy plant. It continues to produce its flower buds until late in the season, and since removing it to the green-house it has opened yet more of its beautiful flowers.

The *Sparmannia* must also be taken up. But the Cannas (with one exception, that of the rare

Ehemanni) may remain until, like the Dahlias, their foliage is cut by the first frost. They will indeed live if allowed to remain with merely their roots protected ; but it is, I find, best to take them up, in order that early in the new season they may be started into growth, so that the period of their flowering may be protracted.

The *Gunneras*, *Rheums*, *Polygonums*, and *Eremuri* may all be allowed to remain, and be mulched or otherwise protected, so that when their foliage is dead their roots and heads may be kept uninjured.

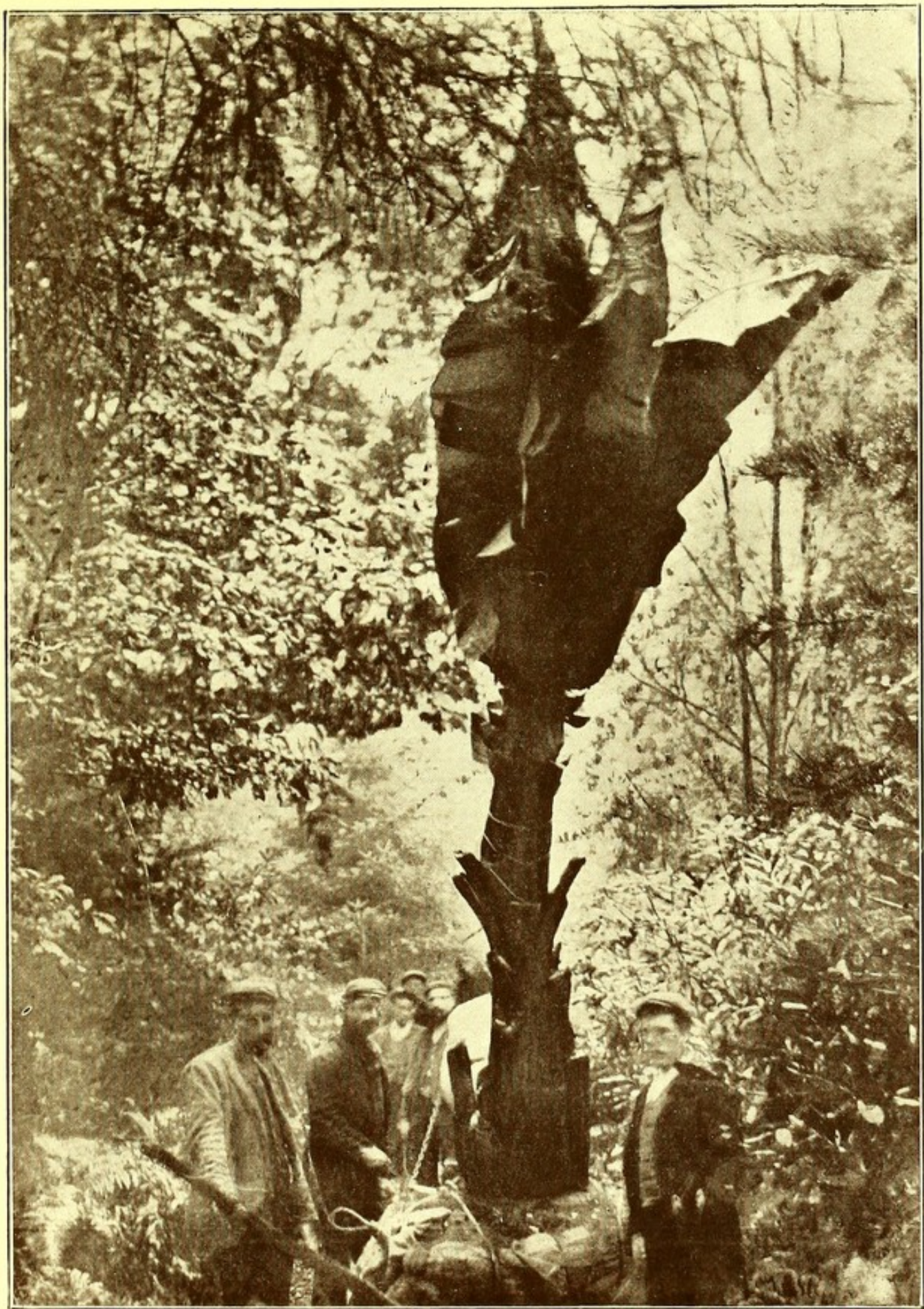
But the *Musas*, although they bear greater cold than several of those mentioned above, must be taken up and removed to the shelter of the glass house. And this is no light matter, and indeed becomes one of the heaviest pieces of labour connected with the dismantling of the garden.

We summon all the strength of our outdoor labour to aid in the work, and six men are none too many to raise the great plants and place them on the low truck or sledge by which they are transported to the house, and we hire a team of horses from our neighbour the farmer to drag the loads the 500 or 600 yards that intervene. It took us all day to excavate the ground around two of the largest plants, cutting a deep and wide trench some 3 or 4 feet from the bole or trunk, and then mining underneath until the great ball of earth,

permeated all through with fleshy roots, was sufficiently isolated. Then old sacks were carefully adjusted to the ball all round, and tightly secured with small rope. Now we made a rough netting of stronger rope, and by turning the mass over until the great leaves, secured together with bands, fell over so far as they would allow, we got the meshes of the net under the mass, and with long poles passed through the netting and over the ball of earth and roots, we lifted with no little difficulty, and with the united force of the men, the great plant and its rooted mass out of the pit and on to the level ground.

When two had thus been treated it was time to give over the day's work, and on the morrow we succeeded in lifting them successively on to the sledge, and with the team of horses transported them to the houses. On the way I took the accompanying illustration, but unfortunately the day proved to be a sunless one, with a drizzling fog, and the photograph is but a poor one; still, to some extent it illustrates the size of the plant, and indicates some of the difficulties of transport which I have described. None of the other *Musas* were quite so bulky as the first two, and their extradition was accomplished with less difficulty.

I have left one big *Musa* out for the winter as an experiment, carefully, so far as possible, covering



CARRYING A BANANA TO THE GLASS-HOUSES.

it up, but I confess that it is a forlorn hope to expect that it may do well. I placed four long poles around it, and tied them together at their tops; then covered three-fourths of their length with coarse canvas, so as to form a pent-like roof, and wrapped the trunk with dried fern, tightly secured with rope; then placed iron sheets around the base to keep the roots as dry as possible and some fern around the bases of the leaves, which were loosely tied together.

If we have a winter at all like those of the last three years the plant may live, may even perhaps do well, but should a frost like that of 1894-95 unfortunately be our fate the plant will be sacrificed. But who knows? The worst of our English climate is its uncertainty, and we in Gloucestershire are far worse off in the general run of our winters than the more favoured dwellers in distant Cornwall.

XX

THE WANING YEAR

THE richly-coloured tints of autumn; now far advanced, had announced with no uncertain voice that the glorious summer of the year was over and gone. The Lime-trees on the carriage-drive had put on the tints of gold, in strong contrast to the deep green of the Austrian Pines that were placed alternately between them. The brown and spotted leaves of the Sycamores were fast dropping, the first of the deciduous trees to herald the fall of the leaf.

The Azaleas were already a blaze of ruddy yellow, and the great leaves of the Polygonum, more than a foot long and of commensurate width, formed a mass of rich, warm yellow as they overhung the lower pond, while the lesser Polygonum was fast dropping its tawny leaves, and displaying still clustering around its stems the white bracts of its seed cases.

The Bracken made a sea of colour rolling down the sloping banks, and arching like the curl of a

tawny breaker over the gravel path. The Birches drooped their festoons of small, heart-shaped leaves, spangled with yellow ones amidst the green, while the silvery white of their upper branches gleamed bright between them. Already the foliage of the Wild Cherry (*Cerasus sylvestris*), which in this county grows into a forest tree, had put on its really gorgeous tints, and its scarlet orange hues fairly glowed amidst the humbler colours of the woods, richest of them all.

The Chestnut (*Castanea vesca*) had ripened its fruits somewhat early, and now and again the thud was heard of its falling clusters of prickly involucre, which, burst by the concussion, scattered its plump nuts over the path and amidst the grass, spangling them with ruddy brown.

Nearly all the forest trees and the humbler shrubs yield their quota of the prevailing tints, and the leaves of all deciduous trees, in contrast to the evergreen, which drop more or less unfaded, yield either rich or dingy shades of yellow.

But the penultimate effects of some, as in the case of the richly-coloured Maples, may be to substitute an intermediate shade of green, followed by the brightest red. This is especially the case in that Japanese Maple which has its leaves so deeply serrated as to resemble the deeply-cut foliage of the Fern. It is a dwarf plant, whose

branches bend over from a height of about 3 feet, and spread or radiate out in every direction, yielding an almost plane surface on the top. Its succession of colours leads through bright red, bronzy red, with penultimate green, ending in scarlet.

It is strange how the chemistry of Nature and the elements of light combine to yield those delicate and charming successive changes of colour in the tissues of the leaf. It would seem that the underlying tint of blue which combined with the yellow to form the green, is the most evanescent, disappearing before its accompanying colour under the influence of failing vital power or with the changing effects of light on the altered tissue elements of the surface.

Indeed, the subtle influence of light must play an important part, for with artificial light the colours of flowers all lose the element of blue—purple becomes red, and the shades of blue become fainter, while the underlying tints of orange and yellow are more defined.

In the wild garden but few of the brighter tints of summer remained, and most of the flowering plants had dropped their petals, with the exception of the rose-coloured *Canna Ehemanni*, and the blue *Agapanthus*, and the golden *Lilium auratum*, which were yet awaiting the frost, and the clumps of *Rudbeckia* and groups of *Asters*, with their

yellows and whites, which were in tune with the prevailing colours of the season.

Our young friend the Padre had left us, and the young scion of the R.A. was too much engaged with outdoor (and indoor) attractions to take a place in the conclave under the big Pine. The Professor and I had therefore smoked our pipes in dual confraternity under the old tree, but the scent of dying leaves and the chill of the deep shade had deprived the spot of its past charm, and it became evident that we should not again care to resort to the umbrageous corner.

There is something of a dejected disagreeableness in the contemplation of doing anything that we like for the last time, if even it be the last time in a twelvemonth. There have been occasions in my life when I have done something for the last time with satisfaction, but they have been few, and, as a rule, there is a latent suggestion underlying its doing which adds a tinge of melancholy. I said something in unison with this tone of mind, and quoted the lines of Mrs. Hemans :

“Leaves have their time to fall,
And flowers to wither at the north wind's breath,
And stars to set ; but all
Thou hast all seasons for thine own, O Death !”

‘Yes,’ said the Professor thoughtfully, ‘it is a question which must obtrude itself on many minds in serious moments, the great question of the future,

and you and I are beginning to feel that we are in the position of a man whose lease is running out, and who has no option of renewing. He must change his home and his environment, and he is naturally sorry to give up the interests which have for years been growing dearer, and which have, perhaps mainly for psychological reasons, sent their roots ramifying into his very nature. But the question is as unanswerable to-day as it was to the profoundly religious, yet pagan, Roman Emperor, who has left us his deeply human lucubrations on the matter, or to the philosophical astronomer and poet of Persia, who wrote :

“I sent my Soul through the Invisible,
One Letter of that After-life to spell ;
And by-and-by my Soul return'd to me
And answered, ‘I myself am Heav’n and Hell.’

“Heav’n but the Vision of fulfill’d Desire,
And Hell the Shadow from a Soul on fire,
Cast on the Darkness into which Ourselves
So late emerg’d from, shall so soon expire.”

‘Ah,’ said I, ‘but I think we have reason to see that the instinctive belief so deeply implanted in human nature of a brighter hereafter than is attainable in this life has a substratum of truth, and that the thought embodied in the beautiful lines of Blanco White in his ‘Sonnet on Night’ is a true one. You know he first depicts the doubt

that enshrouded the mind of Adam when the darkness of the first night came on, and his delight in finding a new universe opened to his astonished gaze, which the presence of light had obscured—

“And lo ! creation widened in man’s view !
Who could have thought such darkness lay concealed
Within thy beams, O Sun ? Or who could find ;
Whilst fly, and leaf, and insect stood revealed
That to such countless Orbs thou mad’st us blind ?
Why do we then shun death with anxious strife ?
If Light can thus deceive, wherefore not Life ?”

Yes, indeed ! With our comparatively purblind senses, by which alone we are in touch with the mysterious laws of Nature, how little can we understand what a being with infinitely higher perceptions, our own Ego, as it emerges into abstract light, may learn to know ! Think of the ocean of knowledge that may open to our view when seen with the eyes of the Soul.’

‘Yes,’ replied the Professor. ‘Given a soul and an eternal life much may, indeed, be granted. But of the heaven of the ordinary conception I cannot conceive. What kind of place must it be to contain the innumerable millions of spirits that have passed through this world, and how much congruity will the lately emancipated find there ? There are, it is computed, 1,500,000,000 of inhabitants of this earth alone, to say nothing of other worlds infinitely greater than our own, and

the world has been inhabited pretty thickly for at least 100,000 years. Given, therefore, a death-rate per annum of forty millions, and multiply this by 100,000, and you may begin to see, though not to comprehend, the number of those who have passed over to the majority from this world alone. Something of this must have dawned on the mind of the late Poet Laureate when he wrote—

“What is it all—swallowed in Vastness, lost in Silence,
Drown'd in the deeps of a meaningless past?”

‘True,’ said I, ‘but he wrote also when approaching the time of his own “crossing the bar” in a tone of higher and nobler faith.’

‘Have you heard anything of our clerical friend?’ asked the Professor.

‘No,’ I said, ‘except that he has rejoined his duties in the darker regions of the Metropolis. I like him much; he is thoroughly in earnest, and in due time his better knowledge of the world and its difficulties will tone down his zeal into good working order and open his mind to broader thoughts. Have you not been a little hard on him?’

‘I hope not,’ he replied. ‘I, too, like his earnestness and admire his attachment to principles, but these young graduates too easily suppose that induction into clerical office endues them with all the authority of a priesthood, and the idea of

priestcraft and its pretensions, from my knowledge of what has happened in the world's history, is repugnant to me, for priestcraft or sacerdotalism is the same whether found in the ranks of the Pagan, or the Romish, or the English Church.'

'The old antagonism between science and religious dogma,' I ventured to suggest.

'There may be antagonism between religious dogmatism and a rudimentary knowledge which a great writer has denominated "science falsely so called," but surely there should be no antagonism between a religion founded on truth and a knowledge of facts founded on truth, which alone is science—God's truth as evinced in His revelation and God's truth as evinced in the laws which govern His creation,' answered the Professor with some warmth. 'You and I are old enough to make allowance for partial knowledge, but it is difficult to make allowance for the assumption of infallibility.'

Just then there were voices, young voices, in animated debate not far off and a laugh which we both recognised, and it was clear that the speakers were approaching the garden, and the click of the closing latch of the gate indicated their entry.

'But let me read you some verses which I feel confident that you have never heard before,' said the speaker.

‘Read on, Sir Gunner,’ she replied, and he read :

“TO LAUGHING EYES.

“When first I saw those eyes of gladness
Love within my bosom strove ;
Love, alas ! of muse and sadness,
Loving that which could not love.
In those eyes so sweetly shining,
Gaily danced such sweet delight,
My poor love’s unskilled divining
Fondly hoped he read aright.
Ah, misguided ! to be widowed in their light.

“Alas ! my love has learnt too dearly ;
Oh, sweet eyes, which it could move !
In your glance which beams so clearly
Sweet mirth revels, but not love.
Eyes of merriment, a cadence
Gay as marriage bells have ye ;
But, my love, whilst every deep sense
Vibrates to its gaiety,
Knows too well the music breathes not love for me.”

‘Your poetic gift does you credit,’ she said ;
‘but why allow your muse to be prophetic ?’

‘Oh, maiden with the laughing eyes,’ said the young gunner, ‘you know I love you.’

‘So do other people,’ she said.

‘But no one else could, or ever would, love you as I do,’ he appealed.

‘Are you not a little overconfident ?’ she replied—‘just a trifle self-confident ?’

‘Confident in one way, but altogether self-abased in another,’ he said, with an earnestness in his voice which the maiden surely must appreciate.

‘What a mixed sensation!’ she cried, with a little laugh which was certainly less derisive than usual.

‘Nora, dear! Will you never take me seriously?’ he expostulated.

‘If I took you at all, it would, I *suppose*, be seriously,’ she answered. ‘But is there not something hypothetical in supposition?’

‘Oh, bother supposition, Nora!’ said he. ‘You know I am in deadly earnest.’

‘Earnest you may be, but why deadly?’ she inquired, with a laugh still in the voice.

They were slowly walking up the little path on the opposite side of the pond, and the mass of trees on the island entirely shrouded us from view; but it would perhaps be indecorous to be discovered if they prolonged their walk to our side of the garden, and the Professor and I took the opportunity to retreat in due time. And as we quietly closed the little gate the silvery laugh reached us once more from the head of the garden.

‘Poor gunner boy!’ said the Professor.

‘Perhaps,’ I rejoined, ‘he has not read the lines of the poet, who evidently knew a thing or two of human nature, especially of feminine nature, when he wrote :

“Why did you take all I said for certain
When I so gleefully threw the glove?
Couldn't you see that I made a curtain
Out of my laughter to hide my love?”

* * * * *

The sun was setting ‘in a bed of daffodil sky,’ and the great trunks of the Larches in the Home Wood were lit up on one side by the reflected light, while in the inseting of the picture between them the nearer wood-covered hill was taking on a deeper shade of violet, and the gleam on the river down the valley was a pale primrose, when at the bend of the path leading up the fir-wood there appeared the daughter of the house and the Gunner.

The beauty of the scene must have impressed them favourably, for they both stopped and turned to look at the picture, and stood side by side in the deepening twilight.

Neither said anything, and the laughter had somehow died out, possibly being out of place, either by reason of previous seriousness or under the influence of Nature's calm.

The young man's hand had sought hers, and, meeting it half-way, he lifted it gallantly to his lips.

APPENDIX

NOTE ON THE LOSS OF CONTROL BY THE WILL CENTRE OVER THE EMOTIONAL SYSTEM

THE tendency of the emotional side of cerebral function to break away from the command of the will and to assume an uncontrollable domination of the actions of the body, either in one particular direction or in a universal turbulence, is illustrated in the various forms of hysteria, which under certain circumstances becomes widely infectious and epidemic, so that the mere sight of one thus suffering from loss of mental balance induces the same condition in the onlookers.

In a late number of the *British Medical Journal* is noticed a paper by M. Lasnet, published in the *Annales d'Hygiène et de Médecine Coloniales*, in which he describes attacks of hysterical chorea to which the Sakalavas of Madagascar are liable. The disorder commences with incessant shaking

of the body, accompanied by irregular movements, incoherent speech, and delirium, proceeding to bacchanalian dances of the wildest nature, and ending by the fanatics finally falling to the ground and foaming at the mouth, and, once commenced it spreads through whole villages. The natives, of course, believe that they are possessed with devils or spirits.

But it must not be supposed that uncivilized barbarians only may be so affected, for similar forms of nervous outbreak existed for several centuries in Europe, as see Professor Hecker's 'Epidemics of the Middle Ages.' In Germany it was known as the Dance of St. John, and as St. Vitus's Dance. The Professor says: 'Those affected by it formed circles, hand in hand, and, appearing to have lost all control over their senses, continued dancing, regardless of the bystanders, for hours together in wild delirium, until at length they fell to the ground in a state of exhaustion. Enormous numbers were affected, and the mere sight of the sufferers served to set up the malady in fresh victims.' The alarmed authorities in 1418 and following years organized pilgrimages to the shrine of St. Vitus, hence the name, influenced by the wide extent and disastrous results of the epidemic.

In Italy similar epidemics occurred, and were

known as Tarantism, being popularly ascribed to the bite of the Tarantula spider. The condition reached its height in the seventeenth century. The influence of music in exciting the maniacal dancing was most marked, indicating its source in the emotional side of the brain.

Epidemics practically identical have been recorded in Abyssinia, Russia, Java, and in more recent times in America, where, indeed, some fainter evidences of the same neurosis have been recently observed as a result of their religious camp meetings.

The probable anatomical explanation of these phenomena may be that the cerebral centres or sections especially associated with the emotional system are either more richly supplied, through the bloodvessels, with vaso-motor nerves, or that these nerves are less easily under the control, under will influence, of the inhibitory centres, whence from an unguardedly large supply of stimulating blood the function of these centres is liable to undue stimulation as compared with the purely intellectual centres.

It may need explanation, to the general reader, that the vaso-motor nerves regulate by their action the calibre of the vessels, and consequently the supply of blood to the part. The act or function of blushing is a case in point. The sudden flush of the face or neck under the in-

fluence of emotion is due to the vaso-motor nerve action allowing the bloodvessels of the skin to suddenly dilate, whereby the capillary vessels of the surface are flushed with blood and their colour is visible through the skin.

THE END











