

THE ROMANCE OF GARDENING

by

^{FRANCIS}
F. KINGDON WARD B.A. (Cantab.)
F.R.G.S. (Gold Medallist), F.L.S., F.R.H.S.
(Victoria Medal of Honour: Veitchian
Gold Medal)



JONATHAN CAPE
THIRTY BEDFORD SQUARE
LONDON

FIRST PUBLISHED 1935

**JONATHAN CAPE LTD. 30 BEDFORD SQUARE, LONDON
AND 91 WELLINGTON STREET WEST, TORONTO**

**PRINTED IN GREAT BRITAIN IN THE CITY OF OXFORD
AT THE ALDEN PRESS
PAPER MADE BY JOHN DICKINSON & CO., LTD.
BOUND BY A. W. BAIN & CO. LTD.**

CONTENTS

	PREFACE	9
I	AN ENGLISH GARDEN	13
II	THE LURE OF FLOWERS	30
III	THE WILD FLOWERS OF ENGLAND	45
IV	THE PERVERSENESS OF PLANTS	60
V	SHRUBS AND TREES	80
VI	FLOWER SHOWS	96
VII	THE GEOGRAPHY OF THE GARDEN	112
VIII	ALPINES	123
IX	INTRODUCED FOREIGN PLANTS	139
X	WHERE OUR PLANTS COME FROM	152
XI	UNFAVOURABLE CLIMATIC CONDITIONS	163
XII	PLANT HUNTING DAYS	177
XIII	THE FINDING OF 'ORANGE BILL'	198
XIV	ON THE TOP OF THE WORLD	215
XV	FROM CHINA TO CHELSEA	236
XVI	THE OWNER GARDENER	254
APPENDICES		
I	PRINCIPAL PLANTS INTRODUCED BY AUTHOR	265
II	PLANTS WE SHOULD LIKE INTRODUCED	269

ILLUSTRATIONS

LOOKING DOWN INTO THE DELEI VALLEY	<i>Frontispiece</i>
RHODODENDRON ARIZELUM	<i>facing p. 16</i>
LILIUM HYACINTHINUM	36
RHODODENDRON VELLEREUM	72
BAMBOO JUNGLE	92
GENTIANA GILVOSTRIATA	146
AT THE FOOT OF THE HILLS	172
THE IRRAWADDY	190
A MEADOW OF LILIES	198
THE TIBETAN FRONTIER	210
ABOR HUTS	216
MECONOPSIS SPECIOSA	222
ADUNG VALLEY	228
A NEW ASTER	234
CREEPING RHODODENDRON	246
PRIMULA AGLENIANA	258

P R E F A C E

IN this twentieth century small gardens are taking the place of the feudal estates of the nineteenth. It has been one of those slow changes which gradually alters the face of England; but it is now almost completed and it is due to a variety of causes. The horticultural revolution, set in motion towards the end of the nineteenth century by Mr. William Robinson, and his disciple, the late Miss Gertrude Jekyll, and the work of the firm of Veitch, and their great botanical explorer, the late Ernest Henry Wilson, at the beginning of the twentieth century, provided the means; while the social-industrial revolution which has taken place since the War provided the will. Nowadays, a house without a garden is as impossible as a house without a bathroom. The stateliness of the terrace garden has given place to the camaraderie of the rock garden; we are all more intimate with our plants than were our grandfathers. And we need to be; for we have ten times as many to look after — species and varieties collected from every corner of the world, as befits a roving nation.

I have spent twelve years on plant hunting expeditions in China, Tibet, Assam, Burma and Indo-

P R E F A C E

China, and have introduced perhaps five hundred different plants into cultivation, of which *one* has achieved universal fame — the Tibetan Blue Poppy.

Much of my time in England between expeditions has been spent in visiting private gardens, flower shows, botanical gardens such as Kew, and herbaria, such as that attached to the Natural History Museum.

In the following chapters, I have set down some of my experiences and ideas, and have tried to link up such diverse, yet kindred subjects as plant-hunting, gardening, and the science of botany, which together have contributed so much to the beauty of modern England. Even now we are only at the beginning of the age of gardening. Fifty years hence I expect to see a more beautiful England still, thanks to the great interest taken in flowers to-day.

F. K. W.

HATTON GORE
HARLINGTON

THE ROMANCE OF GARDENING

CHAPTER I

AN ENGLISH GARDEN

WHAT, it may be asked, is a typical English garden? The Dutch garden, the Italian garden, the Japanese garden, are characteristic and quite unmistakable. What is there corresponding to any one of these which is essentially and peculiarly English? The answer is — nothing. There is no English garden. There *was* an English garden, as I learn from a recent book by Eleanour Sinclair Rhode:¹ that was the Elizabethan garden, now as extinct as the dodo. It has never been revived. And the reason is plain enough. The Dutch, the Italians, and the Japanese, built beautiful cages and put plants in them. The English have made large collections of beautiful plants, and have then put a garden round them. The Elizabethan garden was far too small and formal to contain the treasures of half the world. In other words, with the English the cultivation of plants comes first; their arrangement and the setting are secondary. It is only recently that the English have toyed with garden design. When they have learnt the art of arranging plants, they will un-

¹ *The Story of the Garden.*

THE ROMANCE OF GARDENING

doubtedly have the most beautiful gardens in the world; at present they have only the most promising materials.

Early English gardens seem to have been simply a copy of continental gardens, especially the formal Dutch garden. And modern small gardens 'suitable for a town house', are a variation on the same theme. But as the tireless English found themselves able to cultivate more and more exotic plants, and enterprising enough to acquire them, so their ambition grew. Everything was pressed into the service of horticulture. Glass houses and frames were put up; fields, walls, woodland, streams, bogs, lakes — all were capable of supporting plants. When they tired of these, men turned their attention to less likely places such as cliffs, quarries, chalk-pits; and discovered, somewhat to their own surprise, that they could make plants grow there too. The very house walls now support many a plant; though it is difficult to imagine that the grim castle walls of the Middle Ages were so decorated. Men grew tired of beds and herbaceous borders; anyone can grow plants in a bed. But it takes some skill to make a plant grow on a rock. So rock gardening became popular. The rock garden in fact is essentially English. One cannot, however, claim that the typical English garden is a rock garden, because in the first place comparatively few people own rock

AN ENGLISH GARDEN

gardens, and in the second place nearly every rock garden is only a part of the whole. But the rock garden is distinctly the English contribution to garden architecture; it is a feature, and an important feature, of many modern English gardens. In provincial England, the typical garden is a piece of grass with a bed of flowers round it. In the towns it is a plot of grass, with flagstones all round it, and some plants growing between the flag stones. In the country, it is a large collection of plants, growing under the most diverse conditions. For the practical Englishman is a horticulturist first and last. He wants to grow plants: to pit his intelligence and his skill against the powers of nature. He is very little of an idealist; I doubt whether he will ever create anything to rival the hanging gardens of Babylon. But then they owe their glory chiefly to hanging.

Of course there *are* a number of really exquisite gardens in Great Britain, especially amongst the hills of the West country, Scotland, and Wales. Here have been created vistas and landscapes undreamed of in a ruder age. Some of the gardens, helped by the pitch and roll of the land, seem to be only a lovelier part of the countryside from which they have sprung; the wilderness melts almost imperceptibly into the garden, and the garden fades away into the wilderness. There are quivering gradations of colour and of form: joyous combinations: dazzling

THE ROMANCE OF GARDENING

contrasts. Yet the whole is harmonious, as though hewn out of the living hills. Again there are many delightful small gardens, which have given their owners years of restful pleasure. This bit of rock work enshrines a memory of some Tyrolese holiday; that glimpse through the trees has captured the spirit of an historic view, rich with associations. The very plants have histories: some were given by friends, some were collected on a holiday and brought home with loving care, some were even bought and paid for. And as each treasure flowers, it conjures up dear thoughts of the past. Always it is the plants themselves we come back to, not the mere framework in which they are placed; indeed some of them have been moved backwards and forwards, and sideways, seeking the happy home. For the first consideration of the English gardener is to make the chosen plant grow, at all costs; and if it will flourish only in one spot, there it must be, irrespective of any other plant which may also be growing there. The two may clash bitterly, or sort ill together; but that is a secondary matter. In consequence, though there are some beautiful gardens, there are also many which are a jumble of interesting and rare plants in luxurious disorder; or which sprawl languidly from one style to another, in an unfinished symphony of colour, for no particular reason, save the whim of the owner. The awful



truth is, England is in danger of passing from a land of beauty to a land of beauty spots. But what of the shapeless matrix between, from which these gems have separated out with such startling brilliance? Is that to be left to seek its own salvation? There is no denying that the perpetual striving to be beautiful at all costs is a menace to beauty; but it would indeed be sad if one sought in vain for any hint of beauty in the desert between these jostling oases.

Unquestionably, if one wants to see plants growing, one should visit the modern gardens of Great Britain; if one wants to see gardens, one should see how they cultivate plants in Italy and other countries; or go back to the England of forty years ago. For there was one feature about English country gardens, as gardens, which was unique; children could enjoy them. It is almost as though, once upon a time we had set out to make gardens for children; and perhaps that *was* the most English thing about them. Alas! where are those gardens now? The style has lapsed! Most of us can look back on a childhood which, whatever its limitations — and in the last century they were great — contained many happy hours; and the happiest, of hallowed memory, were those spent in the garden. Nowadays gardens, even English gardens, are becoming horribly utilitarian places. The grown-ups have taken charge of them for the propagation

THE ROMANCE OF GARDENING

of rare plants, the shaping of scenic effects or — vilest Philistinism — the cult of lawn tennis. They have at last discovered what children could have told them from the beginning, that gardens are pleasant places in which to spend one's leisure hours. But the grown-ups look at them from the wrong angle, the purely aesthetic instead of the purely romantic.

Children have little use for bald earth, fenced with wire, and marked out in rectangles, sacred to the agilities of tennis. But a lawn however bare, is all right if you can play cricket, or flags, on it. Neither do they care about trees of unfamiliar aspect, which are so rare and precious, that scarcely are birds allowed to build their nests in them, let alone children climb them; or beds filled with solemn plants over which even the cat minces at its peril. This holy ground is not for irreverent children to desecrate.

Yet here and there, buried in the depths of the country, you may still find a garden such as children can enjoy; a fossil, preserved from an earlier age. It is always called an old-world garden, and that is just exactly what it is. For children live in a world of their own, a world full of giants and fairies, of Pucks and hobgoblins, which is a world as old as the history of man.

At the back of the house there is a lawn, not too

AN ENGLISH GARDEN

well trimmed, and rose beds. A few stately trees flank the winding path, but they are such as an active child can climb. A high wall and a hedge cut off the main garden from this more formal parterre where the grown-ups indulge in those mysterious operations, involving the use of tools, summed up in the word gardening. But even this 'royal enclosure' has its uses. There is no notice warning children and dogs to 'keep off the grass'; and tea under the weeping ash on the lawn is immensely popular. Even mowing the lawn has its attractions; dew drops sparkling on the grass on a fine autumn morning, and the glitter of hoar frost on a winter's night when the moon is just topping the dark brows of the Cedars, are never failing sources of delight. In the autumn, too, there are fairy rings to dance in; if you can keep awake on the night of the full moon you may see the fairies. The lawn of course is in great demand in the winter. After dark on Guy Fawkes' Day, the boys let off fireworks watched from the safe refuge of the drawing-room window by their friends; and when the snow comes, they roll snowballs across the lawn, and set up a snow man.

But all these games, though jolly enough, are indulged in under the eye of authority, so to speak and the pungent flavour of forbidden fruit is lacking, so that the pleasure grows insipid. Not until they

THE ROMANCE OF GARDENING

reach the high wall beyond the lawn, shutting off the flower garden from the orchard and the meadow and the wild wood beyond the ha-ha, do the children really feel free. When father says 'run away now and play in the garden', he really means 'clear right out of my sight, efface yourselves at the other end of the garden, don't hang round where I can see you from the library windows'; and joyfully the children take him at his word.

Once beyond the wall and the high hedge, they are in a new world. There are all kinds of exciting things here, and a little imagination alters even the ordinary things out of all recognition. The boys at once fill the silent garden with lurking shadows — Red Indians to be avoided, wild beasts to be slain, robbers to be tracked; the girls, not a whit behind their brothers in imagination, nevertheless people these pleasant retreats with a more law-abiding population of beautiful princesses — probably in distress — and fairies. Then follow extensive and astonishing battles in which there is much scalping and valour, before the house party emerge breathless, but triumphant over their enemies, who are rather too hilarious to register defeat adequately. The casualties are slight — one pane of glass in the greenhouse, hit by a high explosive clod, two chrysanthemums trampled underfoot in the *mêlée*, and a gooseberry bush uprooted while entrenching.

AN ENGLISH GARDEN

On other days, the Locarno spirit prevails, and operations are soon under way for digging a hole in the ground. At first the idea of looking for buried treasure holds the field; but it is soon realized by the higher command that buried treasure can only be profitably searched for after a secret map, marked with a cross, has been passed to you by a sinister one-eyed Celestial, preferably on his death-bed. So you decide to make a lake, and then convert it into a diamond mine, which finally deteriorates into a mere passage to the Antipodes.

There is always a spice of adventure about going into the woods, where there is a stream — a mysterious river whose unknown source lies away up in the hidden mountains; also a pond — an unknown lake, as large as the sea. From the woods, perilous expeditions set forth to discover and to conquer. Here the boys, anxious to be pirates when they grow up, launch their frail craft, and hoist the Jolly Roger or embark with Nelson to fight the French; or with Christopher Columbus to discover new worlds. Why wait till they are grown up to fight and explore, and do fine deeds in the world? They can do them here, now, in the garden, in imagination at least. It is what gardens are — were — for.

Some of the difficulty we encounter in making a garden is that we have too many plants from which to choose. We are swamped with plants, or at least

THE ROMANCE OF GARDENING

with names. There are too many second-rate plants in cultivation; far too many inferior forms of first-rate plants are propagated. Some people grow plants simply because they are rare; it is amusing to grow plants which nobody else has, or which nobody else can grow. But one is not thereby making a garden. A garden consists or should consist of the best plants grown in the best way — that is, cultivated properly. There are enough first rate plants on the market — and many more in cultivation — to satisfy the most critical. But here we are on delicate ground, and must tread warily. For after all, what is a first class plant? Who is to judge? It is not necessarily a plant to which the Royal Horticultural Society has given an Award of Merit, or even a First Class Certificate. And that for several reasons: not least because a plant so honoured may, two years later, be extinct. The reader will say, perhaps it is entirely a matter of taste. I like this, you prefer that; let each be satisfied according to his whim. But taste is largely a matter of education, though it may be inherent. There must be some standard of excellence. I may 'like' a portrait by some unknown artist better than a portrait by Sir Joshua Reynolds, and I can buy it to hang in my house if I like; no one will prosecute me. But that does not make my picture better than a Reynolds, or a Gainsborough. We allow the experts to decide

for us which are the best pictures — and the best are above the fickle breath of fashion. But we do not prevent people from having inferior pictures if they want them; and obviously most of us have to put up with inferior pictures, or with copies of good ones, since there are not enough Turners and Rembrandts to go round, even if we could all afford them. No doubt if there were, we *could* all afford them; no doubt we would all *like* to have one or two of the very best; but since we cannot, we must put up with the next best. No one is so foolish as to leave his walls entirely bare because he cannot decorate them with the finest pictures. Now just as there is evidently some standard of excellence in art — or in dogs or horses or cattle — so there is in plants: with this difference, that there *are* enough first class plants to go round. Everybody can have some. Personally, I have no wish to dissuade anyone from growing a merely grotesque plant, if he is fond of it; only I would like to persuade him that it *is* grotesque. And now what standard are we to apply? The first thing is to be certain that we are comparing like with like. Which is the best dog? Obviously it depends on what kind of dog you prefer. That *is* a personal matter. Do you want a big dog, or a small dog: a watch dog, a house dog, or a gun dog: or just a dog? One cannot compare unlike things. So also with plants. It is unfair to make a comparison

THE ROMANCE OF GARDENING

between rock plants and trees, for example; each fulfils an entirely different role. But within each category of plant, we must have some standard of excellence.

Not all the people who have gardens are gardeners, and not all gardeners are successful gardeners. Many people enjoy gardening, though they can no more garden than some people who enjoy a round of golf can play golf. There are even those who buy gardens furnished as people take furnished houses. They know nothing about plants, and care less; they can't be bothered. In a vague and indefinite way they 'like flowers', and, of course, flowers are necessary to decorate the house — the more exotic-looking they are, the better. Primarily they believe that it is the correct thing to have a garden, which they can show their friends round; but woe betide them if their friends happen to be real live gardeners. We can leave these good people to their own devices; they are usually law-abiding and highly respectable.

But there are a great many people who are genuinely fond of flowers, who yet have not much time for gardening. Many who live in the suburbs, and have small gardens, have neither the opportunity nor, indeed, sufficient means to indulge their hobby as much as they would like. To them, very rightly, the hallmark of excellence in a plant is

garden worth. They cannot experiment. Gardening, after all, is the art of making plants grow; and so long as they stick to plants which generations before them have proved will grow anywhere with the least possible attention, they are safe. Of course they can only claim to be somewhat timid gardeners, however keen they may be. But for very many it is the only possible form of gardening. Happily there are plenty of first-rate plants, none the worse because they have been grown in every garden for many years, which will grow by themselves, anywhere, with a minimum of trouble and expense: Wallflowers, Roses, Irises, Fuchsia, Michaelmas Daisies, Phlox, Delphiniums, Pinks, Lilies, Poppies, Anemones — there seems no end to them. And of course there are innumerable annuals — Sweet Peas, Nemesias, Clarkias, procurable for a small outlay. To raise them from seed the gardener needs rather more skill. Who will blame us for sticking faithfully to these old friends! They are all first class garden plants. It is when we enter the rarified atmosphere of expert gardening that the difficulty of defining a first class plant presents itself. The man who owns a large garden, and leisure and money to experiment, will not be content to grow what he knows everyone else can grow. A garden comprises the best plants best cultivated; but the best gardeners are good experimenters. The first

THE ROMANCE OF GARDENING

rate gardener works with whatever material he can get. He wants to find out, not only *what* he can grow, but *why* it grows — or doesn't. And he may succeed in turning a bad plant into a good one: that is, he may succeed in improving it. For the interesting thing is that plants are, if not human, at any rate very much alive. They feel — not acutely, but vaguely. They respond to kindness — sometimes by dying. And to neglect — often by thriving. They are accustomed to indifference, and may repay it by an equal indifference. They are accustomed to competition in all its economic vagaries — 'cut-throat', 'unfair', and 'foreign'. But to those who understand them, they will behave gratefully; and they are human in this respect, at least, that some like to be let alone and some like to be coddled, if not cuddled. Those people who have 'green fingers' will understand what I mean. And it all comes back to this: that there are no rules for gardening. The ultimate object of gardening is no doubt to make a perfect garden; but few indeed achieve that ideal. Which is as well, since to achieve an ideal is to put an end to endeavour. Most of us do no more than bring up a certain number of plants, in permutations and combinations — itself no mean feat. The fact is, no plant behaves quite the same with everybody; or to put it another way, everybody's experience with plants is slightly different.

AN ENGLISH GARDEN

Therein lies both the charm and the provocation of gardening. So long as we look upon gardening as a perpetual experiment, so long will it be the most fascinating of hobbies. Gardening is empirical and pragmatical. That which *works* is best; and the best is different for different people. Thus nothing ought to surprise us! or rather, perhaps, everything ought to surprise us. I do not mean to say that, having grown tired of seeing Water Lilies growing in a pond, we ought to try growing them on a cliff; that is pushing the passion for experiment to foolish and quite unnecessary lengths, since Water Lilies already grow very well in water. But, apart from the broad division of plants into water plants and land plants, one should undoubtedly try to discover the best way to grow each plant, under the given conditions — I mean the unalterable factors such as soil, light and atmosphere, climate and aspect. Listen by all means to what your neighbour has to say about it; but he need not expect you to do precisely what he tells you to do. The chances are you cannot: anyhow you will not. In the words of the old song:

Tootle, tootle, tootle, tootle, tootle, tootle too!
Always give advice to other people what to do!
But say to other people, when they give advice
to you —
Tootle, tootle, tootle, tootle, tootle, tootle, too!

THE ROMANCE OF GARDENING

Our great botanic gardens have not been without influence on our gardening. Here the primary object is frankly as complete a collection of plants as possible; beauty of arrangement, though not ignored, is a secondary consideration. As a result, there is a tendency to cultivate plants of little or no intrinsic merit, as opposed to romantic association. Who shall say that a quaint plant, procured with difficulty from Brazil, or from Mount Everest, is not fairly glistening with romance! And to make the little alien grow is no small triumph. But the plant may be either good or bad, and if bad, no glamour of origin will make it fair to see.

But this is not to say that one should never strike a discordant note in the garden. It is as legitimate in the garden as it is in music. All one asks is that the discord shall be properly resolved.

And so we come back to our original difficulty — who is to be the final arbiter of a plant's excellence? Or doesn't it really matter? As I see it, the good garden plant chooses itself. The first necessity is that it shall grow freely, and reproduce its kind. Many a plant does that, of course; we spend our evenings digging out Thistles and Dandelions. They need no encouragement from us. But without this essential quality no plant can be a good garden plant — though in other respects it may be first class. Of the plants which will grow of their own accord, in

AN ENGLISH GARDEN

spite of neglect — even because of it — I regard those which anybody can grow as good garden plants, and there's an end of it. But men who swim with the crowd are not, of course, in the van. They are not pioneers. That proud position belongs to the man who risks a loss to grow a miffy plant, and discover a reason for its miffiness; or who grows a new plant, or produces a new plant, whether a cross or an improved variety. Many a first class plant is born to bloom unseen — unless you visit it in its own home. It would be grown in every garden, if it would consent to grow in every garden. It may be objected that not being in the hands of the nurseryman, it is not available to the public. That is true of many first class plants; but I maintain that, if they are plants of garden worth, they will quickly become available, until eventually they find their way into every garden by sheer merit.

However the humble grower of guaranteed plants need not be too modest; even he is doing his bit for the English garden. For the number of well-tried plants is legion, and there is always the chance that he will hit upon some novel combination, some new colour scheme, which will bear repeating. At the least, he forms the unyielding phalanx at the back of the movement, the solid foundation on which others may build; through him an English garden may yet be evolved, worthy of the genius of the English people, and the oddities of the English climate.

CHAPTER II

THE LURE OF FLOWERS

WE who live in Great Britain take flowers very much for granted — an unconscious tribute to the excellence of our climate; excellent from the plant's point of view. For it is a curious fact that, generally speaking, the most beautiful flowers grow in the most unpleasant places — unpleasant from the human point of view at any rate; and that no doubt is why there are so many beautiful wild flowers in Britain. There are those who say England has no climate; only weather. It sounds cynical; but I have no intention of being cynical in a matter of such wide interest. If our curious weather is at least partly responsible for our wealth of wild flowers, it is also responsible for the fact that we are able to grow such an immense variety of alien plants in English gardens; plants brought from every continent.

There may be those who, familiar with the no less lovely flowers of other favoured lands, such as the Cape of Good Hope, or the Alps, would deny the peculiar richness of Britain; or, there may be others who, remembering only the contrast between the glory of our gardens in summer, aflame with Roses,

THE LURE OF FLOWERS

and the comparative poverty in colour of our fields and hedgerows, would discount our English flowers.

But although it is unjust, for many reasons, to compare our trim gardens with the wilder parts of the country, it would be a great mistake to disparage the native flora of Britain. Familiarity no doubt breeds contempt; but the sad truth is, few of us are sufficiently familiar with the British flora to have earned the right to be contemptuous. Most of us know only the commonest wild flowers, though these include some of the most beautiful. Who for instance can look unmoved upon the smouldering purple Heather, heaped beneath the Pines, or the brazen illumination of a Gorse clad moor! The sunny radiance of the Primroses, the pastel colour film which the Bluebells spread beneath the trees, and the curdled heads of Travellers' Joy enrich the still wild earth, as well as many places no longer wild. All these flowers and many more are common enough; but if we pass them by unheeding, or regard them merely as so much jug-fodder, it must be because we worship novelty rather than beauty. Our taste is too easily jaded in an age of speed. But there are scores of rarer beautiful wild flowers to which the vast majority of English people are complete strangers. They are either thinly scattered or local — that is to say, they grow in one or two spots only, though they may be abundant over a restricted

THE ROMANCE OF GARDENING

area. But few of us know these sacred spots — luckily. And we owe it to our suave and agreeable climate that we harbour such a hidden wealth of wild flowers. We might harbour many more which we still find in various parts of Europe (where all our wild flowers are found in greater abundance) but for man's interference.

But apart from wild flowers, there are cultivated in this country not less than 12,000 species of foreign plants; more than six times the total number of flowering plants growing wild in these islands. Does it surprise us to go out and see Horse Chestnut trees in bloom along the roadside? Of course it does not. And yet the Horse Chestnut, which is a native of the Near East, Persia, and Northern India, was only introduced into Britain about four hundred years ago. Queen Elizabeth could never have seen a Horse Chestnut. To-day it is one of the most familiar trees in the country, and has been so far woven into our national tradition that the popular press has dedicated a day in the calendar to it — Chestnut Sunday. No wonder we are apt to regard it as a native tree, although it never grows outside a fence! We display a similar attitude of pacific and pathetic ignorance towards a host of familiar garden trees, and flowers such as Lilac, Laburnum, Chrysanthemum, Crocus, Michaelmas Daisy, and Iris, to mention a few.

THE LURE OF FLOWERS

It is not merely that we are ignorant whence they sprang, or how we acquired them; these are questions we might make a show of answering intelligently if we thought they were relevant. It simply does not occur to us to ask such questions. There are the flowers; they have been there for as long as we can remember: presumably they have always been there — so why worry! That is our attitude. It is a very harmless attitude, though we thereby miss a good deal of pleasure. We see them — not indeed every day of our lives, but every spring or every summer or every autumn. We would be very much surprised if we did not. That is why I began by saying we take flowers for granted; because none of those just mentioned belong to this country, any more than the giraffe or the kangaroo belong to it. They have all been introduced from overseas. True, they have in a sense established themselves here; they are almost naturalized aliens, and certainly welcome guests. But if our most familiar plants are aliens, they are at any rate protected aliens. Most of them are only seen in gardens, and can only hold their own so long as they are protected. In open competition with the home grown article they would be stamped out, just as giraffes and kangaroos would be stamped out if they were left at large. True, we see more Lilacs and Laburnums about than we do giraffes and kangaroos. In fact giraffes

THE ROMANCE OF GARDENING

and kangaroos are actually rare in England — you hardly ever meet one by the roadside, and they are just as uncommon in gardens. Nevertheless everyone knows what a giraffe looks like; he could even make a fair shot at drawing one. Most people know, too, where the giraffe comes from, and still more know where the kangaroo comes from; though I would wager a good deal that few people could tell offhand whence Lilac and Laburnum are derived. Occasionally it happens that an alien plant when introduced into a new land, finds its feet, and rampages like virtue in a Sunday school; even as grey squirrels and musk rats, alien beasts originally introduced for pleasure or for profit, are now rampaging.

Who started this come-to-Britain movement amongst alien vegetables? Having regard to the enormous number of foreign plants grown in Great Britain, one is inclined to believe that, so far as our flowers and trees are concerned at any rate, we dwell amidst alien corn. Yet surely the real secret of their presence was the desire of the first comers to live amongst *familiar* surroundings! Britain has been invaded again and again, until finally the invaders themselves having turned settlers became so strong that they faced about, and invaded the very lands which first sent them to Britain. Our parks and gardens to-day epitomize our history. Every time

THE LURE OF FLOWERS

Britain was successfully invaded, be it by Romans, Danes, or Normans, the invaders brought with them their favourite flowers or fruits or crops; just as the English grow their favourite flowers in all parts of the world to-day. That, I consider, is how the transfer of vegetation, which is part of man's environment, begins. But we are very far from these beginnings now, and many of our most familiar trees have been cultivated in this country for centuries; we need to go a long way back to find a time when they were not. Nevertheless there is always a time when, like a new word on trial, they are first mentioned — casually and even cautiously — in contemporary literature; and on that ground we may conclude they had not long been introduced. In 1664, that is during the reign of Charles II, John Evelyn wrote a book called *Sylva or a Discourse of Forest Trees*. Much of our knowledge of when our trees were introduced, and whence, we owe to him. Comparatively few, even of our most ordinary trees, are indigenous in Britain. The English Oak is, of course, a home product — though several foreign Oaks are also grown; the Beech, the Ash, the Silver Birch, several Willows and Poplars, the field Maple, Elm and Lime are all British. On the other hand the Larch, Plane, Cedar and Spruce, to mention a few well-known trees, were all introduced within the last two hundred and fifty years.

THE ROMANCE OF GARDENING

During the last half century the introduction of new hardy plants has swollen from a trickle to a rushing, roaring flood. It has become a more specialized and difficult business. People now collect hardy plants — trees, shrubs or rock plants, as they collect Waterford glass or Flemish pictures. Innumerable plants have been raised from seed collected in all parts of the world, though it is certain that a majority of recent introductions will have but a fugitive existence with us. A few more years shall roll, and they will be asleep for the last time; perhaps never to be introduced again. They are here to-day and gone to-morrow. Horticulture has become the popular pastime of the age; and, as with all popular movements, has carried its own momentum to extremes. Thus it has certainly encouraged the introduction of many second rate plants, which ought to be cut down and cast into everlasting fire — or, at the least, deported to their country of origin as undesirable aliens. Besides these, there are the difficult plants. Naturally people who can easily cultivate the easily grown plants, like to turn their attention to something more difficult. Hence the encouragement they give to plant-hunting. It whets the appetite.

There is no more satisfactory feeling to a keen gardener than to succeed with a difficult plant. There are few minor or triumphs more satisfying



Lilium hyacinthinum at 13,000 feet. Burma-Tibet Frontier

THE LURE OF FLOWERS

than to move an ailing plant in one's garden to a new spot — it may be a few feet away, or at the other end of the garden — and watch it pull itself together and 'come away' (which is Horticultural for 'grow well').

But the real blessing our come-to-Britain invitation to all hardy plants has bestowed on us is, to lighten our darkness in winter. September and October go out in a last flicker of colour, and then as the leaves drop from the forlorn branches, we are left in four months' gloom. True we have our Holly and Mistletoe at Christmas. Indeed a stranger might suppose that these two plants have some religious significance with us, so closely associated are they with our great religious festival. But what on earth have they to do with Christianity? Neither grows in Palestine, or anywhere else in the Mediterranean region; and Mistletoe is actually a symbol from the pagan Druidical religion. The reason they have become identified with the Christian religion in England is because at the annual festival which we call Christmas they are — or were for seventeen centuries — the only decorative plants available. To-day we might — and do — use flowers instead. Thus, except during Christmas week, the home product is not in the picture with the foreign article. It is a walk-over. England cannot compete. Evergreen trees from foreign lands, and some of the new

THE ROMANCE OF GARDENING

deciduous species, which colour even more brilliantly than our native trees, and above all those whose flowers are succeeded by a glut of brightly coloured berries, help us through; together with our late autumn flowers, and early bulbs. I am not denying the beauty of our own stripped trees in winter. The bald tracery of the Silver Birch, the dim twiggery of the robust Oak, the firm aloofness of the Ash, the grey grace of the Beech, are lovely. But this is beauty of form, not of colour; and we northern folk yearn for colour. So we soften the harshness of our winter landscape, and the drab greyness of our loud voiced cities, by every means in our power; and not least by the introduction of foreign plants. The scale on which this has been done is hardly realized by anyone who has not given the matter a thought. Yet it ignites no spark of surprise in us to see the most flamboyant tree brandishing unusual blossoms in our faces, so accustomed are we to seeing flowers of every size, shape, and hue in the flower shops, or even sold in the streets. Few hurrying citywards across Westminster Bridge halt to look at the Paulownia trees underneath Big Ben, even when, as in 1934, they flower. Contrast this happy state of affairs with what obtained formerly. England a century ago, when Queen Victoria first came to the throne, must have been very different from what it is to-day. The industrial age has its compensations;

THE LURE OF FLOWERS

and the twentieth century has at least given us an insight into the beauty of the vegetable kingdom. Two hundred and fifty years ago, could we but see England as it was, we should scarcely recognize it as the same country. Certainly the countryside must have been sombre, though possibly the weather was more radiant. Think of how colourless this foggy little island must have been, throughout five long months of the year! There were no great industrial cities, of course, and the residential areas were very much smaller; the dull acres of bricks and mortar, the wide garish streets with their roaring spate of traffic, the tall lean chimneys, the network of wires — these at least were lacking. There were woods and fields, or marshes and moors, instead. But still there was no colour. England boasts very few evergreen trees or shrubs, and there are no winter flowers. The trees stood naked, shivering in the blast, the hedges were naked, the fields bare and cold, the whole landscape toneless. There was not even one faint chime of colour. No doubt a few gardens existed here and there, but they were small and formal, mostly of Dutch design, and the choice of flowers was very limited. Very few people derived enjoyment from them. In winter they partook of the general aspect of the countryside. They sank into the general gloom.

Mechanization has much to answer for. It has

THE ROMANCE OF GARDENING

covered the face of the land with mines and factories, and with square miles of poky breathless houses, gasping for light and air. It has split the face of the land with broad tracks down which engines hurtle at deadly speed. It has strung wire up and down and across the fairest country, and filled the air above us with loud menace. But while deploring the curse of mechanization, let us not forget the benefits. Revolution has repercussions. Change is never unilateral. If industrialism has marred the face of our towns, it has rejuvenated the face of the countryside. We owe to industrialism our gardens, estates, and public parks no less than our picture palaces, zoos, and museums. How much longer the former will be left to us is questionable.

Apart from lighting our darkness, however, the introduction of more and ever more flowers appeases our insatiable hunger for change. As with clothes — women's clothing at any rate — so with flowers and books, and music. Change, change, something new, for novelty's sake. Non-stop variety is what we crave. It does not matter whether the new is better than the old, or worse, so long as it is different. The third generation can always go back to the forgotten follies of the first. Sometimes it goes back to the virtues, with the air of making a great discovery. We grow tired of the familiar. We want to see what is just over the brow of the hill: what is

THE LURE OF FLOWERS

just over the brink of time. Yet we are contrary creatures, and full of abominable paradox. For under the surface we cleave desperately to the familiar. We hate change, and fear it as we fear death. Change *is* death, worse than death. To the tribal mind, which means to the social mind, change is anti-social; it means death and ruin to the tribe. We feel this instinctively; or at least our ancestors did, and deep within ourselves we have never forgotten that only by keeping *alike*, bound by immutable law, can the tribe survive. That is to say, it is the emotional, not the intellectual side of us which demands change. Our emotions, rigorously kept in check, need continual stimulation. The old stimulus loses its power; the emotions cease to respond. Frantically they cry aloud for a new stimulus. The intellect more balanced, issues a warning; 'danger ahead', it says. The emotions pay no heed. Then the intellect takes a hand. The impatient emotions shall have their new stimulus. True, it is only the old stimulus dressed up. But it gets across. The emotions don't know that. They are contented. So the change after all is not very violent. And the daring pioneers who lead the revolt against the familiar, though ahead of their time, confine their crusades to the non-essentials, the trappings of life. And the movement is always circular; sooner or later it comes back to the starting point. That only

THE ROMANCE OF GARDENING

the mildest departure from the conventional and the familiar is tolerated by the crowd is easily seen even in horticulture. This year's Rose obviously cannot differ in any fundamental respect from last year's Rose; we are down to the nicest distinctions here, so exactly have our Roses been improved. This year's Sweet Pea, happily named, let us say, 'Geneva', must differ only in the finest gradations of tint and form from last year's Sweet Pea, named perhaps 'Mussolini'. But the new Rose, and the new Sweet Pea, called 'Geneva', will sell by the thousand, though they are no more than new editions of last year's popular favourites; and the fierce but temporary spotlight which their name focuses upon them is an indication that they are meant to sell for a season only. But where the nurseryman will make money selling newly baptized reprints of old favourites — particularly if he has chosen a happy name, he will make no money selling a new plant. The plant breeder produces a new Delphinium, a new Tulip, a new Daffodil, a new Iris, and he may make a modest fortune; the plant hunter finds a genuinely new plant and only the most daring and enthusiastic gardener will grow it. The fact is, it takes years for the general public to become genuinely interested in a new plant. The Tibetan Blue Poppy, *Meconopsis betonicifolia*, caught the world's fancy exceptionally quickly;

THE LURE OF FLOWERS

even so, there must be a great many people in the country who have gardens, yet who have never grown it. New plants for old is not a slogan that the nurseryman dare broadcast.

But there are other aspects of plant hunting. New plants do more than minister to our very mild craving for novelty — a craving which, I have shown, we do our best to subdue: of which we are, deep down in our hearts, afraid, if not ashamed. They satisfy our much more lively curiosity and stimulate a genuine thirst for knowledge and ever more knowledge. They satisfy certain emotions.

Not only have we made our northern winters a little more bearable by the introduction of colour which was sadly lacking, but the range of colour all the year round has been greatly increased, and its application extended. Our homes have been brightened, our lives made more gay, our interests roused, our whole outlook broadened. The interest we all take in flowers is well illustrated by the enormous number of people who avail themselves of the opportunity every summer to visit the gardens open to the public in aid of the Queen's Institute of District Nursing. Our public parks, Kew Gardens, nursery gardens, and other places open to the public, attract more and more persons each year; and always the impression made on a few is sufficiently deep and lasting to make them dedicate their lives

THE ROMANCE OF GARDENING

to the study of plants or the planning of gardens. I do not contend that, if we had no foreign plants to help us out, England would be dull and insipid in spring and autumn, still less in summer. Probably long ago when there were fewer houses and more Oak trees, there were also more Primroses. England can be beautiful in the spring, its nascent woods filtering the shrill sunlight through a living pleach into moist depths of sea green and blue where bosses of yellow Primroses grow like coral, and the cool white bubbles of Anemones drift and eddy. I doubt if, with all our boasted wealth of foreign plants we can better that. Rather have we overwhelmed and even marred our own plant communities; and they deserve a better fate. That England, between April and October has always been fair to look upon needs no emphasis. Still, it may serve a useful purpose if I say something about our English wild flowers before passing on to plant introductions.

CHAPTER III

THE WILD FLOWERS OF ENGLAND

FROM time to time an orgy of correspondence breaks out in the press over the destruction of our wild flowers. This generally, as might be expected, starts in the summer, not so much because it is a silly season subject, as because that is the time when wild flowers are most prominently in our minds. It goes on intermittently through the autumn; and fades out in early winter, to crop up again the following year. Societies for the preservation of Wild Flowers, of Nature, of Things as they Are, of Scenery, of Rural England, and all the rest of it, come into being; and many earnest people get very much wrought up. Articles appear in the daily, the weekly, the monthly press, and committees meet. There is some florid writing and plenty of flowery rhetoric, but very little is done, beyond the destruction of more wild flowers.

Now the first point about this hardy annual agitation, is the complete lack of any sense of proportion shown by many of the agitators. Their attitude is a common one; they would eat their cake and have it too. The confusion of ideas is complete. Pre-

THE ROMANCE OF GARDENING

sumably welcoming or at least acquiescing in change in many directions, they want and indeed expect the hustling world to stand perfectly still in one respect; namely in that respect which happens to interest them at the moment. They want to isolate, and freeze into immobility, one particular aspect of the general onrush of life. Change in all around they do see, but not decay — at least not the decay of the wild flowers of England. They forget that change and decay go hand in hand; that the new springs from the ruin of the old. The trees perish; the forest remains.

These people watch unmoved, though without enthusiasm perhaps, the extension of urban areas, the cutting of great arterial roads in every direction, the building of more and more factories, and the growth of cities, with the consequent intensive herding of humanity into a confined space; they perceive the monotony of mechanized labour, and the stifling of every outlet for the imagination; they notice the close atmosphere of the city, the rapid increase of leisure (without any corresponding increase in the means of using it), the artificial lives of the city workers; they know of the ever growing transport facilities whereby these workers may escape for a few days into a world of unfamiliar sights and sounds, a world into which they *dare* not venture, except in a crowd. And then they are surprised

THE WILD FLOWERS OF ENGLAND

when the workers, in an ecstasy of thankfulness and because the unfamiliar world seems kindly to them, pick the flowers lavishly, and of course excessively — for the flowers.

Men have at last discovered, though almost too late, that certain species of plants are gradually disappearing; so of course they write to *The Times* about it — one of the last privileges left to the English country gentleman. Yet we may suspect that some of them really know very little about the wild flowers of Britain. They have got hold of a half-truth, and they intend to worry it, as a dog worries a rubber bone. They fail to realize that in order to preserve the wild flowers of Britain unchanged, you need to shut down on *everything*. You must go further back than holiday jaunts into the country; right back to the beginning, in fact. You must put a veto on the draining of marshes, or re-afforestation — particularly with alien trees — and roadside planting; you must stop the building of roads and railways, to say nothing of factories and houses; and you must stop agriculture — though that seems to have run down of its own accord — and the grazing of stock. In short, you must stop every manifestation of human activity, since every human activity implies interference with the course of Nature. Civilization, or at any rate mechanized civilization, and Nature are incompatible; they are ever at enmity.

THE ROMANCE OF GARDENING

I do not suggest that what we call progress is civilization. Progress to-day often means no more than progression. But it is a result of civilization. Man never allows Nature to work out her own salvation according to plan; he interferes, all the time. Then Nature goes off at a tangent; for note, man cannot *stop* Nature. He can thwart her, check her, divert her even; but he cannot crush her. He can make a successful raid on her; but sooner or later she will hit back. In the cold calculating north, where life moves sluggishly, he may get Nature down temporarily; but in the rain forests of Asia man cannot even do that. A flush hit, and away; he must spring out of reach of the recoil, or he will be overwhelmed. Nature counters every blow with interest; she resents interference, and she never forgets — or forgives. Nature goes on her unsentimental way. Man never quite overcomes her. No power is lost: checked here, she merely breaks out in unexpected places, often in unexpected ways. Balked in one direction, Nature overflows the more volubly in another. Left to her own devices, she is always about to achieve some balance of forces which tends to maintain a fairly static condition throughout long periods of time; she never does quite achieve it — the equilibrium is always unstable; but she approximates to it. No sooner does man appear on the scene than he rudely upsets the balance; and Nature

THE WILD FLOWERS OF ENGLAND
accepts the challenge, striving to reassert it. Then the struggle begins, and is waged unceasingly, if invisibly. For Nature works behind the scenes, in the dark. Man versus Nature. And Nature always wins; she has time on her side, infinite time. There is no quarter; certainly man has no solicitude. Extermination is *his* weapon! The plants, or animals, he does not want can be wiped out for all *he* cares; or kept in confinement. At the best he is utterly indifferent to their fate, at the worst he wages ruthless war. Many amiable phrases and metaphors have been coined to persuade us to believe that man allies himself with Nature. It is all a lie. So far as plants are concerned, he guards just those which he finds useful, and stamps out deliberately, or with a cold neglect, those which he considers harmful, or to which he can assign no useful purpose at the moment. Damage is done perhaps more by introducing new factors than by deliberate destruction. In the animal world there are outstanding examples, such as the introduction of the grey squirrel and the musk rat.

And yet there are people who will write to the press about it. They would be the last to forego the advantages conferred upon us by our mechanized civilization, no doubt; yet they ignore its obvious implications. Industrialism or wilderness, whichever you prefer — but not both. They are mutually

THE ROMANCE OF GARDENING

exclusive. After all, of what use are wild flowers unless we can enjoy them? And certainly we cannot enjoy them until we see them. There are quite a lot of wild flowers in Tibet for instance, but they might as well be in the moon for all the pleasure they could bring into our lives while they are confined to Tibet. Few indeed can go to Tibet and revel amongst flowers; the best we can do is to send to Tibet for them, so that we may enjoy them, vicariously as it were, in our country. And of late years this has been done, to the great benefit of mankind. However, our much abused transport system does enable us to see and to enjoy our own wild flowers — or what is left of them. It has even enabled many of our press scribes to see them, I shrewdly suspect. Rather late, perhaps, some of them have discovered the wild flowers of England; and they have discovered, too late, that some of them are on the danger list. Hence the clamour. It does not seem to have occurred to these misguided enthusiasts that man has been exterminating wild plants all over the world ever since he has been man. No voice is raised in protest against the extermination of wild flowers (or wild animals either) in Malaya, where millions of acres of primeval jungle have been ruthlessly destroyed to make room for the more profitable Rubber tree. *That* is 'progress'. Nothing is said about the extermination of wild

THE WILD FLOWERS OF ENGLAND

flowers on the Canadian prairie, to make room for Wheat. Man does not live by bread alone; but he certainly needs bread. All this outcry against the extermination of wild flowers in Britain comes from a few sentimentalists whose aesthetic sense has been shocked; no sooner does one examine the situation broadly, than it is seen to be a belated cry from the thoughtless who are more soft-hearted than hard-headed.

It is transport — the motor car and the by-pass road, which have led the way in a new attack on our native flora. A simple argument proves this. Fifty, nay thirty years ago, before the English week-end was invented, which of us knew a tithe of the foreign plants in cultivation in this country? Those who lived in the eastern half of Britain knew nothing of the Andine plants which flourished in the moist south-western gardens of Somerset and Devon. Those who lived on the Yorkshire oolite had probably never seen the Himalayan Rhododendrons on the Bagshot sand or even vaguely heard of them. A journey by train into the depths of the country to a see a friend with a ten-mile drive in a dogcart at the other end, was not lightly to be undertaken; nowadays, it is a commonplace to see each other's gardens; we go by car every week-end — we are enormously better informed on what plants are grown, where they are grown, and where the finest

THE ROMANCE OF GARDENING

specimens are to be found. As I have already pointed out, gardening was never so popular as it is to-day. And the motor car has had much to do with the boom which has floated on a flood of gardening books and gardening papers; we know the rock gardens and the formal gardens. We know where the Andine and the Himalayan plants are to be seen at their best; we know the keenest and the most skilful gardeners in the country. Nowadays even a great daily newspaper would no more think of neglecting its horticultural column than it would think of omitting its crossword puzzle. At the beginning of the century, horticulture, so far as the majority of Englishmen were concerned, simply did not exist. To-day, the more everything else slumps, the more gardening booms.

But with the increase in our knowledge of foreign plants, there has been a corresponding decrease in our knowledge of English plants. The fanatics stoutly maintain that they have no objection to people seeing our wild flowers, or even to picking them in moderation. Doubtless it is with this praiseworthy object that they are so anxious to preserve them for posterity. But it is just here that the confusion of ideas becomes manifest. The very conditions which have so sharply divided the urban and rural populations have made it inevitable that when they do venture into the country, the city workers

THE WILD FLOWERS OF ENGLAND

will satiate themselves with flowers; that they will pick to the point of exhaustion, both of themselves and the flowers, and presently abandon a vast surplus. They are bound to become intoxicated with the novelty of wild flowers, and their first conscious feeling will be a desire above all things to possess them. That is human nature. It is no use saying them nay. We all suffer from it. Few of us in our hearts can see a thing of beauty or rarity, without wishing to possess it. Our passion is always to possess, if only for a time. The more cultured no doubt confine their covetousness to a few special lines — Louis Quatorze snuff-boxes perhaps, Ming vases, or the Dutch painters; but children are less eclectic, and will garner anything of which there exists a variety, sufficiently limited in numbers to satisfy the competitive spirit; anything, from cigarette cards to spiders. Perhaps the less cultured minds are comparable to the child mind, in so far as they are receptive of new ideas. But unlike the child mind, the uncultured mind easily becomes drunk with new wine, through reckless indulgence.

In short then, spoliation of the countryside is the natural outcome of conditions in a highly industrialized state. Every new house built, every new by-pass opened, every public park laid out, every acre brought under cultivation, or put down to grass, nay every new plant introduced, brings

THE ROMANCE OF GARDENING

about some change, some reorganization and adjustment of the native flora in that district, and hence in ever-widening circles over the adjacent countryside. Just as men are pressed into ever closer aggregations by the machine, so are the wild flowers of England forced into enclosures between the cities. The range of a given species becomes restricted — its area of distribution becomes broken up into several areas separated by spaces in which it does not occur; that is to say, it becomes discontinuous, then local, finally rare, and very rare. It may even die out altogether.

Plants have certainly been exterminated, or almost so, in this country; but not by picking them, or digging them up. It is almost impossible to exterminate a plant by those methods, until other causes have operated to make it both local and rare. A plant may be so reduced in numbers by picking its flowers that it becomes locally rare; but it is not exterminated. It takes a very long time and a great deal of publicity to exterminate a plant by these methods. By the time it has become rare, the hunt is up. It is not by direct assault, but by more furtive, less deliberate methods, that plants are wiped off the map. More plants have been localized by the making of golf courses and pleasure grounds than by the thoughtless flower picker. And observe, it is only our own wild flowers which the pundits are

THE WILD FLOWERS OF ENGLAND

at pains to preserve; the wild flowers of wilder lands must look after themselves. Our wild flowers may be very beautiful; but they do not satisfy us. It is natural that they should not do so. Most people who go to Switzerland or to the Tyrol or the Pyrenees for a holiday bring back with them a few plants which they have dug up. It does not seem to occur to them that they may be helping to exterminate a species. 'Oh!' they say, 'there are plenty more.'

The best way to preserve a plant from the vandal hand of society is sometimes to dig it up and take it away. If some religious significance can be tacked on to it, so much the better. What should we know of the Maidenhair tree, or Ginkgo (*Salisburia*) were it not for the Buddhist monks of China and Japan! No wild specimen is known in Asia to-day. Yet there is hardly a temple courtyard in the interior of China which does not preserve one; and even were it to die out in the East, it is so well established in Europe that there is no chance of its being lost.

Of course some eager hot gospeller will indict me for a pessimist; but at least I see the issue clearly, and see it whole. I have no illusions — or at any rate not many; and I maintain that it is a waste of breath to blow against the monsoon. I yield to none in my fondness for our English wild flowers — I found most of them as a boy. I deeply regret that Bluebells and Primroses, and other favourite flowers

THE ROMANCE OF GARDENING

are threatened with extinction, as I am told they are — although I must confess I see as many of them nowadays as I can remember seeing in my boyhood. But I never forget that the face of England is being re-made not in one feature only, but in every feature. England is changing all over, every day, as she has changed a dozen times in history. Preservation means self-preservation; otherwise it is that most hopeless of tasks — a negative activity. No good Buddhist ever dreams of preserving a shrine; he lets it rot, and builds a new one. The moist face of Burma is freckled with pagodas. Let the dead bury their dead — that is the Burman's attitude. So the Roads Beautifying Association and the Forestry Commission are doing far more for the improvement of Britain than all the preservation societies in the country. It is futile to bewail the past; better to hail the future. England fifty years ago was doubtless a wilder, tidier, cleaner, greener land than she is to-day; but to-day she gives health and pleasure to thousands who then would never have known what it was to see wild flowers or to hear the voices of birds. Whether that is ultimately an advantage or not depends entirely on the point of view. But since beauty is necessarily subjective, it can have no existence apart from those who appreciate it; and the natural corollary is that the more people enjoy it the greater its power for good.

THE WILD FLOWERS OF ENGLAND

Nor was the England of fifty years ago the England of the Restoration. What, too, of the forests which covered the land in the time of say, the Wars of the Roses? What were the South Downs like in the days when the Saxons burnt chalk and worked iron there? Certainly very different from what they are to-day. Would we recognize to-day the Devon familiar to the Roman centurions who looked across from Exeter Castle to the ford of the Exe, beyond which dwelt the rude tribes of the far hill country? A score of Englands have come into being, shone for a time, and passed away to be succeeded by something else, better or worse, but anyhow different. Each succeeding England is different, partly by reason of the ever-changing proportions of forest and swamp, grazing and cornland, which means ever the rise and fall of plant species. One may be sure the yeoman of England bewailed the dwindling of the Yew tree, just as Nelson's admirals deplored the increasing scarcity of the Oak. But these were no emotional outbursts: they sprang from real qualms, seeing that the very existence of England has depended at times on the Yew and the Oak. No longer does a lack of Yew or Oak threaten England's existence. But the Yew at least has fallen under a sinister shadow these days; and we obtain a curious insight into the knowledge of our flora displayed even by the more intelligent classes. There was a

THE ROMANCE OF GARDENING

case reported in the press not long ago, of a man admitted into a mental hospital, following a nervous breakdown and attempted suicide. Shortly afterwards he died and a post-mortem showed that he had eaten a quantity of Yew leaves. As there were Yew trees in the hospital grounds, the source of the leaves was obvious, but it turned out in evidence that none of the doctors knew that this was a Yew, or that the Yew was ever anything more than a shrub! The jury, who of course knew all about Yew trees, brought in a verdict of death by misadventure, and added a fool-proof rider to the effect that 'all bushes, shrubs and trees *like the Yew* should be removed from the grounds of hospitals and institutions to which mental patients have access' (Italics mine). Comment is needless.

It would seem that some plants, at least, which appear to have been almost, if not quite, exterminated, are still latent in the soil of England through their seeds. There has been some correspondence in the press lately about the longevity of seeds, and nothing more interesting has come to light than this matter of dormant seeds which have lain long in the soil awaiting an opportunity to germinate.¹

The march of civilization is responsible for this

¹ Professor E. J. Salisbury adduces evidence that seeds of *Anagallis latifolia* can lie in the soil for over half a century and then germinate.

THE WILD FLOWERS OF ENGLAND

suppression of species. Cornlands are turned down to grass, and many an alien weed has lost its naturalization papers. Marshes are drained, forests are cut down, fields are built over, and the wild flowers of England are driven further back, suppressed, or sometimes perhaps exterminated. It is inevitable. But our preservation societies will see to it that every corner of England is searched and scrutinized and the last drop of beauty wrung from her. She will be squeezed dry; and so hedged about with prohibitions that we shall flee from our beauty spots as from plague spots. But of all the attacks launched by the preservers, that against the botanists and field clubs is the silliest and most indefensible.¹

¹ I wrote this chapter before reading the latest correspondence which has since appeared in the *Gardener's Chronicle*. Mr. H. S. Redgrove has there cogently stated the case against the so-called preservation societies, and defended the botanists with humour and good sense. He has been violently assailed, so evidently the fanatics and ignoramuses are in the majority.

CHAPTER IV

THE PERVERSENESS OF PLANTS

IN these days of doubt we ought surely to be thankful for trees and flowers and all green and growing things. The great popularity enjoyed by gardening, and the increasing numbers who visit flower shows proves that in fact we are. Bacon's idea of the 'greater perfection' of gardening seems to be true. From the fact that God Almighty first planted a garden, he deduced that it was the purest of human pleasures; and from the fact that civilized man builds stately palaces before ever he gardens finely, he argued that gardening must be the most civilized of all the arts, and would necessarily be the last attained. We have now reached a stage in our civilization sufficiently advanced to be able to garden finely; so perhaps the slump has done some good after all, guiding our attention towards simpler pleasures. One may be unconscious of any direct healing power possessed by gardens; but no one will deny the soothing effect of flowers on the spirit of man. They are symbols of peace and tranquillity. The perpetual miracle of growth, the yearly cycle of change, so gradual yet so profound and apparently

THE PERVERSENESS OF PLANTS

final, the unfolding of bud to leaf and flower, involving adjustments so infinitely finer than anything man can compass, are a source of joy and wonder. The absolute assurance that it will be repeated next year, and the year after, and for ever, gives us a confidence which nothing else gives. We see the Buddhist cycle of rebirth going on under our eyes in the garden. Even in the tropics there is a rhythm. After the day's labour in the teeming city, there is no balm like the peace of an English garden in the scented summer twilight. Certainly it is more pleasant to be surrounded by beautiful colours harmoniously arranged, by quick and challenging shapes, than by sad grey lifeless earth and torpid forms and dead brick walls and smoking chimneys, by pots and dust and all the litter and tatter of a garish civilization!

There is always hope for the man who loves flowers, and I for one will never believe that the bottom has fallen right out of England so long as there are gardens, and men to tend them faithfully. First the planning, then the making and planting, finally the blossoming. There are many ways of making a garden, or rather there are many styles of garden, formal and informal; and the elements of a garden, the plants themselves, are legion. Now these are the bare elements of a garden: form and colour, scent and sound, and the surprise of contrast; and it

THE ROMANCE OF GARDENING

needs an elegant blending of all to make a perfect garden.

Anyone who seeks that 'peace which passeth all understanding' or, as the Buddhist calls it, Nirvana, might well turn to his garden to distract his mind from the daily anxieties of life. We all love flowers for their graciousness of form, no less than for their delicious colours, and sweet fragrance; and there is nothing which gives so great a return for the labour and money expended on it as a small garden. Thanks to quick transport from the scene of our daily labours, few of us are without some sort of garden, if we can afford to live only a few miles out in the country; even for those who are forced to live in the city, there are public parks where they can enjoy vicariously the gardener's craft. When the city man comes home, tired after his day's work, it is to his garden that he turns, not only for recreation but for comfort. Sitting outside after supper one warm June night he watches the shadows lengthening on the lawn as the sun drops slowly in the west; a great peace descends upon him. We can picture the scene, as he sits there drinking in the richness of the earth, while the outlines of the trees melt into the lilac dusk. One by one the colours are eclipsed first the reds, then the blues, last of all the yellows. But the scent of the rose lingers. A faint breeze stirs the leaves; and a bat wheels swiftly overhead, and is

THE PERVERSENESS OF PLANTS

gone like a spirit. Now it is dark; and presently without warning the trees begin to cast shadows anew, faintly at first and on the far side of the lawn. A rich glow suffuses the east; the full moon has risen. Thus he sits, bathed in the golden radiance; and as he dozes his troubles slip from him like a garment, and he dreams of the flowers which have sprung up at the touch of his hands. There they stand in royal array, a tribute to his skill and patience; Roses, Irises, Larkspurs, Paeonies, Lupins, and many more, in tumultuous colours and shapes. He has watched over them in their infancy, tended them in sickness, gloried over them in their prime. He has made of them that worth while thing, a garden; and in blossoming time the garden has been as balm to his soul. So, even in these hard times, let us not neglect our gardens, but rather sacrifice much else, that we may enjoy the purest and most exquisite pleasure in life: the yield of mother earth in all its strange forms. Truly the cultivation of flowers is something more than a luxury; it is a religion.

But many of us live too near the city to be able to possess a real garden. We have only a small plot of mother earth; it is level as a billiard table, and there is no tumbling water to thrill the air; nor are there song birds at dawn and dusk, but rather the everlasting throb of the hurtling machine. A niggard nature has denied form, so it would seem; *our*

THE ROMANCE OF GARDENING

world is void. But the truth is, nature gave us the flat places of the earth to till the soil and cultivate plants, and we have abused the gift. In a mechanical age we have built ourselves cities on the plains, which were given to us for our crops, and left the hills gutted and abandoned. How much more thrilling life would be if our cities were in the hills. What scope for the engineer, for the architect! A city set on a hill! The hanging gardens of Babylon would be elementary compared with what our bold designers might achieve! Of course, we have been utterly lured away by false gods — the rapid accumulation of pelf — things which you may touch or see. Wordsworth, standing on Westminster Bridge, was dazzled by the glitter of wealth like the rest of us. If he had seen Simla, which is the beginning of a new earth, if not of a new heaven, or Gyantse, or Tsela Dzong, he might have written a lyric rather than a sonnet. Form is lacking, by nature, and peace has been murdered by man, and we are left with the raw material to build again as best we may. Yet we need not despair, for we have the last elements of which a garden consists, without which form is but naked shape, coldly geometrical, and sound and colour and scent are never born at all; we have our flowers and shrubs — even trees, if we are fortunate. And for the rest, if we cannot have more — and all men do not desire a garden — there are our public

THE PERVERSENESS OF PLANTS

parks and gardens and playing fields, well laid out, which minister to our needs, though we take no more than a communal interest in public parks over which we have no direct control. Now the more in contact with the city we are, the more we tend to cultivate foreign plants. I cannot say why, but so it is. If you live in the country, and have a large garden, you are certain to grow many English trees at least; but the nearer you come to the city, the more your plot of earth dwindles in size as it rises in price, the more dependent are you on foreign plants. Perhaps few of us realize how many of our commonest garden flowers *are* foreign. It is not until we ask ourselves seriously whether such and such a plant *is*, in sober fact, English (that is whether it grows wild in the woods or the hedgerows of England) that we come to the conclusion it cannot be English. We may perhaps fall back upon the theory that it was born and bred here; but it is simpler to assume that it grows wild possibly in some part of Europe, say by the shores of the Mediterranean or in the Alps or the Balkans, or on Mount Olympus. It is true that in its wild state we might not recognize it: nurserymen have 'improved' our Wallflowers, Stocks, Pinks, Michaelmas Daisies, Violas, Tulips, Delphiniums, Irises, and scores of other flowers, sometimes out of all knowledge. But their humbler forefathers at all events grow wild still, unimproved,

THE ROMANCE OF GARDENING

and after a little practice we could easily recognize them for what they are. Near towns, where the atmosphere is full of gases which are no ingredients of pure air, the emanations from factories and engines, few plants can live, still fewer thrive. One need only examine the leaves of evergreen trees after a London winter fog to realize this. Every leaf is covered with a glutinous black film. This presently hardens into a crust which defies even the rain to wash it off. The trunks and branches of the trees are likewise blackened, and as this foul deposit gradually wears off, it goes into the soil and poisons the living roots. Small wonder that gardening in the neighbourhood of a big manufacturing town, or even near a big arterial road, is heartbreaking; the one smirching the clean air with smoke and acids, the other belching forth fumes of petrol and charred oil, and filling the air with the finest particles of dust. No wonder few but deciduous trees which shed their leaves at the beginning of the most perilous season can thrive in such polluted air. No wonder the cult of the uninspiring aspidistra in Victorian times, before the flood gates of the Eastern floral treasure house were opened. But to-day we have infinitely more plants to choose from. From an ever lengthening list we can select plants suitable (no matter what our soil) for any part of Britain, whether the cold dry east coast or the moist and mild west

THE PERVERSENESS OF PLANTS

coast. Ornamental and flowering shrubs, deciduous or not, shrubs with coloured foliage or coloured fruits, or those whose leaves flash into gorgeous autumn tints ere they fall, bog plants, herbaceous plants, rock plants, water plants — there is no limit to them. Annual, biennial, perennial, the nursery catalogues overflow, even if their information is sometimes slightly misleading. And misleading it may be. Thus I recently picked up the catalogue of a well-known firm and learnt to my surprise that *Meconopsis* was a group of herbaceous perennials! Naturally I assumed that this firm only listed the few perennial species, for the majority of *Meconopsis* are biennial. But no — of the four species mentioned two were perennial, and two never anything but biennial. Anyhow it was a scurvy offer, considering that fully a dozen species, three or four of them perennial, are in common cultivation. This however only shows how many excellent plants are unobtainable by the average gardener; unless he visits the Royal Horticultural Society's shows he can have only a limited idea of the plants in cultivation to-day. Now, let us clearly understand the meanings of these words, annual, biennial, perennial; to which may be added a less familiar word — monocarpic. A large number of plants flower only *once* in the course of their lives; then they die. For instance the Talipot Palm (*Corypha umbraculifera*)

THE ROMANCE OF GARDENING

which grows a hundred feet high; also the common blue Speedwell, and the even more common Shepherd's Purse. At first sight it seems an odd conceit to compare the splendid Talipot of India with the blue-eyed yet insignificant Speedwell of the English hedgerow. Yet it is strictly true to say that both flower once, only to die. The same is true of most of the Himalayan Poppies, of many tropical Bamboos, and of hosts of other plants. And this is the manner of it. The Speedwell, that banal but pretty weed, grows up from seed in the spring, flowers in the summer, and having ripened its seed in the autumn, incontinently perishes: its life has lasted about six months, and during that period it had completed its life cycle. It is an annual. Sprung from a seed, it has itself set seed to carry on the family tradition and — exit. The Himalayan Poppy (*Meconopsis napaulensis*¹) grows up from seed in the spring, forms a rosette of leaves, and a root, during the summer, and then proceeds to sit tight during the winter without doing anything more. In the following spring it wakes up, and after a period of activity, it produces a tall flowering stem during the summer, ripens its seed during the autumn, and perishes incontinently during the winter. Like the Speedwell, it too has completed its life cycle, from seed to seed, only it has taken longer

¹ Usually known in the gardens by its synonymous name *M. Wallichii*

THE PERVERSENESS OF PLANTS

to do it — two years or rather about twenty months, instead of six or eight. It is a biennial. The Talipot Palm, being a very tall tree, naturally takes many years to grow a hundred feet or more high. Year after year it puts forth its crown of leaves and adds a cubit to its stature; year after year its old leaves drop off, and it grows a little stouter, a little taller. But it does not flower. Oh! No! Like the Speedwell and the Himalayan Poppy, when it flowers it dies: so it does not flower. It does not want to die. Indeed it cannot flower, for it has not yet grown strong enough to do so. Each year it lays by a little of its substance. At last it feels strong enough to flower, and it does so in one magnificent burst, spending all its savings, and producing a tremendous crop of seeds. Its huge inflorescence is visible from afar. By now it is a tall slender tree. Perhaps it is a century old. Alas! this is its swan song! It has flowered — the cycle is complete from seed to seed — it is marked down for death. It has exhausted itself, and it too perishes. All three plants, the annual Speedwell, the biennial *Meconopsis*, the perennial Palm, are *monocarpic*; that is, they produce fruit and seed *once only*, and then die.

After these single-minded plants which work themselves up into a fine frenzy of flowering and, having handed on the torch, perish outright, the dullard plant which dutifully reproduces itself year

THE ROMANCE OF GARDENING

after year, like a stud bull, comes as an anti-climax. Most English and foreign trees fall under this heading. Nevertheless it would be a mistake to suppose that a sumptuously flowering tree such as a Rhododendron, or a large bush, such as a Lilac (*Syringa*) blooms year after year. Nor does the Philadelphus which is also, but wrongly, called *Syringa*—and, less happily still, Mock Orange, though it has as much to do with an Orange as a mock turtle has with a turtle). In nature at any rate, they do not flower regularly each year, whatever they may be persuaded to do in cultivation. If they flower profusely one year they exhaust themselves, and next year they wisely take a rest; if they did not they would certainly outgrow their strength and pine away. For flowering is a serious affair. It takes a tremendous surplus of food, the savings of a season, to smother a big tree Rhododendron with blossom, and still more to ripen thousands of capsules containing millions of seeds; and in nature, where so many plants are drawing on the common fund, there is not enough food available. Consequently it is no rare experience in the Himalaya to see whole tracts of hillside covered with Rhododendron scrub, completely flowerless. Inspection will reveal whether the plants flowered freely the previous season or not — they may not have done so. The reason why you cannot travel in the

THE PERVERSENESS OF PLANTS

Himalaya or in the Chinese Alps without seeing leagues of Rhododendron blossom is simply that in any given year, not all the Rhododendrons will be sulking. There are such limitless forests of them, so many different kinds, such wide fells all swamped beneath the waves of Rhododendron, that they do not *all* fail. Nevertheless it is rare indeed to travel in Tibet, say, and not to notice some which have failed. But in the garden of course, there are ways and means of working the plant harder, and making it pay its dividend. Whether in the long run it is good for the plant is another question. But in the first place, the plants are not grown so thickly in a garden as they grow in nature; the competition is not so fierce. Again man can feed his tame plants, just as he feeds his tame animals, his dogs and cats and cattle, and with just those essential foods they lack: phosphates, nitrogen compounds and the like, the rarer food stuffs of the barren soil. If drought comes he can water them. He cannot reverse the process; but as the Rhododendron at any rate, when growing wild, gets far more water during the summer than it does in England, even in the wettest periods, that does not matter. So long as it does not get waterlogged, its roots can stand being flushed. Finally, after it has flowered profusely, he can dead-head it — that is, cut off all the seed-capsules before they have had time to ripen their seeds — thereby saving the plant further effort in

THE ROMANCE OF GARDENING

providing food for its innumerable progeny. This is an operation which nature cannot perform, and it is therefore scarcely surprising that after an extravagant crop of flowers, the bush takes a holiday. On the other hand no one who takes the trouble to go as far as the mountains of Western China need fear that he will not see Rhododendrons in bloom in the spring. Either in the forest or in the scrub belt, or in the alpine region, he will be quite certain to see a spectacle unparalleled in the world — tens of thousands of Rhododendron trees flowering in splendour. For there are a hundred species and more, and millions of trees, and not all of them fail together. A given species, or a dozen species, may fail one year, and produce hardly a bloom between them; but it is no more than a drop in the ocean. Scores of other species are flowering generously. At some future date, people will fly to the eastern Himalaya in the late spring, just for a glimpse of the Rhododendrons in bloom.

And now to return to our annual or biennial or century-old plants; it is clear that for all their outward differences such plants, numbering of course thousands of species, have this fundamental character in common: they flower, and produce offspring only once in a lifetime. Then they die. That which has a limited size has a limited life. A big tree is alive only in the sense that a coral reef is alive. The actual



THE PERVERSENESS OF PLANTS

living cells are on the outer margin: the central structure is mere scaffolding. Anyone can satisfy himself on this point by looking at a hollow tree, such as some of the ancient Beeches at Burnham, still fully alive and growing. The fact that some plants never live to be a year old, and others die before the age of two — and this has nothing to do with infant mortality, because of course the plant reaches maturity — while some live to a considerable age, does not vitiate the fact. But a large number of plants, common and otherwise, go on in the same old way year after year, putting forth leaves at one season, flowers at another, with the greatest fidelity and regularity. They are the backbone of the plant world, staid, uninspired, dully respectable, but entirely dependable; and we call them perennials. But unlike the Talipot Palm they are *polycarpic*. They give no trouble to anyone. Nearly all trees and shrubs belong to this class. There are only a few startling exceptions such as the Talipot Palm and the Century Plant (*Agave americana*), weird and provocative vegetables which might have stepped out of an Arabian nightmare. Trees may be deciduous or evergreen; but herbaceous perennials usually die right down in the winter and come up again in the following year: that is to say their underground parts remain almost unchanged. This is conspicuously true of bulbous plants such

THE ROMANCE OF GARDENING

as Tulips, Daffodils and Crocuses. I have drawn a paradoxical parallel between the English Speedwell and the Talipot Palm. It is a strange contrast! Now I propose to draw another. If you go to the tropics, and note the forest trees, you are sure, sooner or later to see something which you never, or rarely, see in England: bunches of fruit growing out of the *trunk* of the tree. Not every tree, but some trees. It is at any rate common enough to attract your attention, and it is highly quaint. The trunk of a bulky Fig or Jack (*Artocarpus*) may be so hung over with fruits as to give the appearance of coloured glass globes on a Christmas tree. Sometimes they look more like some foul excrescence. Another example is the Cannon Ball Tree (*Couroupita guianensis*) of tropical South America. Apples and Pears and Plums do not hang from the trunks of our orchard trees; they hang from the ends of the twigs. And so, when we see this strange phenomenon in the tropics, we are amazed, and think we are looking at something utterly different from our own familiar fruiting trees. In our country trees and shrubs produce their flowers either on this year's or on last year's shoots; or even on three-year old shoots. If last year's shoots produce the flowers, and this year's only the leaves, the plant is said to flower on the old wood. It is an important distinction when it comes to pruning. But though many shrubs grown in this

THE PERVERSENESS OF PLANTS

country flower on the 'old wood', the wood, in point of fact is not so very old — a year, or two years at most. Flowers do not spring from wooden branches which are five, or seven, or twenty years old. But in the tropics they do. In fact there is no limit. The wood may be of any age, twenty, fifty, a hundred years old: and still it may break out in an orgy of reproduction. But the production of flowers directly from the wood is not entirely unknown in this country, on introduced plants. As a matter of fact there is a species of Fuchsia (*F. exochordata*) hardy in the mild south-west parts of the country near the sea, which bears its flowers — when it bears any flowers — directly on the old wood, the branches being several years old, probably ten at least. The Judas tree (*Cercis siliquastrum*) often flowers from the trunk. Thus there is nothing so very mysterious in cauliflory as it is called, beyond the mystery of flower and fruit at all. This tropical exuberance is a difference of degree, not of kind.

I have spoken frequently of fruit and seed. As every gardener is concerned with both, it will be as well to understand exactly what is meant by the term 'fruit'. The fact is we use the words 'fruit and vegetables' very loosely, though usually we have no difficulty in deciding what is a fruit, and what is not. But what the botanist means by a fruit is not always what the layman means by a fruit; and it is con-

fusing to have two meanings for a straightforward word. I shall therefore define and use the word 'fruit' in the strictly botanical sense. This definition will be found to include several 'vegetables', besides a number of objects which the layman might hesitate to admit as 'fruits', though chary of calling them vegetables. In botany, then, a fruit is the ripened ovary of the flower, and contains the seeds. Thus a vegetable marrow, commonly classed as a vegetable; is really a fruit: so too is a cucumber. We all know that apples and cherries and raspberries and grapes are fruits: but it would be as well to understand that French beans, peas in the pods and tomatoes also are fruits. 'Vegetables' would include all other parts of plants, root, stem or leaf: for instance, carrots, cabbages, and cauliflowers really are 'vegetables', not fruits. The essence of a fruit is that it contain seeds; unless, of course, these have purposely been bred out of it, as in seedless grapes and seedless bananas. But all fruits are not succulent. There are dry fruits — nuts, for instance, and *Rhododendron* capsules. Fruit is not synonymous with 'dessert' — or at least not in botany.

Everybody knows more or less what a 'seed' is; and yet few people realize the implications in the word seed! Biologists are at pains to impress on us the fact that deep down in the beginning plants and animals were so much alike that it is impossible to

THE PERVERSENESS OF PLANTS

separate them. Plant? or animal? asks the man of science, peering through the microscope at the squirming amœba or the rolling volvox. Most people would say that animals move about while plants remain fixed: and mainly the distinction is valid.

It is just when we get down to the simplest forms of living matter that the distinction on those lines becomes blurred. At the point of divergence the presence or absence of a chemical substance called chlorophyll, which gives the green colour to leaves and stems, is a good guide. Plants contain chlorophyll and are therefore green; animals do not contain chlorophyll. Whether they are mobile or not, does not matter. The distinction holds good for unicellular creatures. Even in the higher plants however, chlorophyll is sometimes absent. Such plants are either parasites or saprophytes. The former batten on living plants, ironically called the host, sucking their juices; the latter scavenge on dead organic matter, drawing nourishment therefrom — a vulgar way of living. Examples of both are found amongst the Orchids. They all live on the ground, not on trees. Those Orchids which live on trees, and are commonly called parasites by the layman, derive no sustenance from the tissues of the tree itself.

Plants are just like children; infinitely lovable,

THE ROMANCE OF GARDENING

infinitely tiresome. If they weren't tiresome they might be less lovable. Never to have given one's parents a moment's anxiety would be an epitaph most of us would shrink from with loathing; it would be as unholy as the damning indictment 'he means well'. Now plants removed from their ancestral home and transplanted to an alien land are apt — especially when they have a history dating from the ice age — to resent it. Often I have written in my field notes something like this: 'Rock plant, flowers mauve, height 1 foot.' So it is grown on a rock in the rock garden, and it grows three feet high, with purple flowers. (Unkind people say I can't tell mauve from purple!) Sometimes, however, I have written: 'Height 5 feet. Flowers glowing scarlet; on limestone cliffs; first class. Provisional name "Marvel of Asia".' Some years later a friend has pointed out to me a puny plant on his rock garden. It is anaemic and looks as if it had got rickets. 'What is that abortion?' I ask. 'Your "Marvel of Asia",' he says bitterly. 'It has been there for ten years. Its flowers are magenta. It has not changed, or grown up, or down; it hasn't even died. It is always the same. It will be just the same ten years hence. If nothing kills it, I shall,' he adds savagely. 'Try growing it somewhere else,' I say unsympathetically: 'in a bog, for instance, under trees where it is really shady and the soil is acid.'

THE PERVERSENESS OF PLANTS

In desperation he follows my advice, hoping to put the plant out of its pain. Next year 'Marvel of Asia' flowers riotously in a vermillion blaze. Plants are perverse creatures.

The plant which comes up year after year, but can never make up its mind to flower, is a mockery. I have in mind a certain giant *Incarvillea*, collected ten years ago in Tibet. In a Sussex garden, two or three of them appear in spring year after year, grow up, and die down again in the autumn. They have not yet flowered. Some *Rhododendrons* grow so slowly, that though they are only a couple of feet high as seen in Asia, yet one knows they must already be middle-aged. In this country they hardly seem to move an inch a year: and it will be so many years before they reach flowering age that only those who have infinite patience — and are planting largely for the benefit of the next generation — will persist with them.

There is no doubt that every plant has a minimum flowering age; but it does not follow that the plant will flower as soon as it has reached that age. There is direct proof to the contrary.

CHAPTER V

SHRUBS AND TREES

THERE are few trees more familiar to Londoners than the Plane. Its scientific name is *Platanus acerifolia*, which indicates that it has leaves like a Maple. Of this astonishing tree, Edward Step wrote delightfully:¹ — ‘In spite of the fact that the Plane is an exotic of comparatively recent introduction, it seems in a fair way of being associated in the future with London. It has taken with great kindness to London life, in spite of the drawbacks of smoke, fogs, flagstones, and asphalt.’ Its harlequin bark, its tortuous twigs emerald tipped in spring, the pleasant shade cast by its foliage in summer, the pattern of its limbs, bare against the wintry sky, are friendly and familiar aspects; and if it is tiresome in the autumn, when its soggy great leaves are flapping about like bits of yesterday’s brown paper parcel — well, the stripping is soon over. The Oriental Plane was introduced into this country during the sixteenth century. The origin of the London Plane is unknown but it is commonly reckoned to be a hybrid.

¹ *Wayside and Woodland Trees* by Edward Step, F.L.S. Mr. Step, however, has confused the London Plane (*Platanus acerifolia*) with the Oriental Plane (*P. Orientalis*).

SHRUBS AND TREES

In the London suburbs, there is to be seen in many a garden a tree so curious, so utterly unlike any other tree, that once seen, it cannot be forgotten; its very name is unforgettable — Monkey Puzzle, also called Chile Pine. Botanists call it *Araucaria imbricata*. It was introduced into this country from Chile in the year 1796, and some genius, struck by its remarkable appearance, invented the popular name for it — appropriate enough, even though there are no monkeys in Chile. One might indeed suspect that the baffled animals had emigrated from Chile in disgust, when one learns that there are whole forests of the *Araucaria* in the southern Andes.

What a shock the white men must have had, when they gazed for the first time on a forest of Monkey Puzzles over a hundred feet high! The shrillest nightmare could hardly conjure up a more terrifying sight! However, in this country the Monkey Puzzle has been regarded for a century as an ornamental tree, and we are so familiar with it, that it holds no terrors for us! We have known it from our boyhood: and since birds do not nest in it, we have had no occasion to climb its scaly trunk.

Very different is the Laburnum hung with streamers of pale golden butterflies in May. It is one of our most charming trees, and every suburban garden is enriched with its lambent festoons in early

THE ROMANCE OF GARDENING

summer. It has been with us for over three centuries, yet it has never become naturalized. It hails from central and southern Europe.

By this time it is clear what I am driving at. I wish to draw attention to some of our most familiar trees and flowers and to remind you — in case it had never occurred to you — that not a tithe of our most commonplace plants are native to England. Some it is true have taken out naturalization papers; more have not. Yet they are as well known to us as most of our own native plants — perhaps better. Who for example does not know the common Lilac, an alien from the Balkans, but grown in England for more than three hundred years, better than he knows the English Wayfaring-tree! Who would not more readily recognize the exotic Cedar of Lebanon than the homely Dog-wood? Not much Protection here! We have always encouraged Free Trade amongst foreign plants, to the lasting benefit of our country.

Now there is a deep fascination in this inquiry into the history and origin of our trees and flowers. You cannot walk down even a London street, in the heart of the greatest city in the world, without coming in contact with these exotics. Our parks are full of them. Our gardens owe their splendour to them. Grateful as we might well be to those lands which have provided us with a wealth of colour, we have still more reason to be proud of ourselves, and thank-

SHRUBS AND TREES

ful to those farseeing and public spirited men who made our country beautiful. Foreigners did not politely send us plants; we went out into the world ourselves, and fetched them home. It was the English who made England beautiful—in some directions we are now doing our best to wreck the work of our ancestors.

Let us then take the year round in England and ask ourselves whence some of our more familiar plants have been derived for each one has a story to tell.

And since we must begin at some arbitrary point, let us begin at the New Year, according to the western calendar; that is to say, as measured by the sun. The advantage of this over the lunar calendar beloved of the less exact eastern mind, is, that the date is determined by a planetary event so remote that it will not alter perceptibly in our time; whereas New Year's Day, according to the lunar calendar, may fall on any date between our January and March, necessitating drastic action later on to prevent harvest time working its way into the middle of winter, to the consternation of all good husbandmen. After Christmas our gardens begin to look a little lean. Yet I know a garden in Somerset, whose skilful and fortunate owner can count on about two hundred different species of plants *in bloom* during Christmas week! This will come as a surprise to

those who know only the eastern counties. Yet there are not wanting gardens on the west coast of Scotland, or nestling amongst the Welsh Hills, which could equal this. January is indeed a barren month, yet our Januaries have a trick of being mild; and not a few flowering shrubs take advantage of the respite, together with bulbous plants. By the time the 'cold snap' comes, one feels that the first faint whisperings of spring are not so far away. Still, berried shrubs have lost their fresh complexion — the birds have been after them. Evergreens are feeling jaded; many of them have a hang-dog look. At this season flowers are welcomed eagerly. *Mahonia Bealei* is building up golden pyramids, and the rosy flowers of the Japanese Cherry, *Prunus subhirtella*, var. *autumnalis* are a fresh delight. The chalk white corymbs of *Viburnum fragrans*, are quite startling, and the sweet fragrance of this shrub gives an added pleasure. It is a native of Korea. *Rhododendron mucronulatum* should be in bloom this month, and *Sycopsis sinensis*, introduced from China little more than thirty years ago, will flower in a mild January, though it usually comes later. This brings us to its near relatives, the Witch Hazels, those delightful shrubs whose naked branches erupt in clusters of amber antennae. They are natives of North America (*Hamamelis virginiana*), Japan (*H. japonica*) and China (*H. mollis*), all perfectly hardy winter flowering shrubs in Britain. One

SHRUBS AND TREES

is apt to get a false idea of our wealth of winter flowers, especially in London; partly by reason of the mass of imported flowers coming from the south of France, and the favoured Scilly Isles, partly as a result of looking in shop windows, which display a wealth of forced flowers (that is, raised under glass). Welcome as they are, I am dealing now only with garden plants, which stand out all the winter, for better or for worse, and take their chance. The fact is, anyone who introduces a winter flowering shrub, has done a service to his country. It is the most difficult time of year; it is also a time of preparation in the garden. In two months will come the great awakening; meanwhile the heralds of spring are doubly welcome. Winter Aconite, *Primula altaica*, and *P. Wanda*, are in flower; the Himalayan *Primula Winteri*, *Anemone hepatica* from anywhere in the mountains of Europe, Cyclamens, from Greece probably, and Crocuses, also. Dainty as they are, one must grow these small flowers in large numbers to be effective. Luckily flowers are so rare, that on the rock garden at least, quite modest clusters are visible against the bare earth. February is much the same as January, but usually colder, or wetter. Most of us have long been reduced to growing Hyacinths in china bowls. The garden is a sorry sight. A ragged wind flutters and drifts about the city streets, slapping you harshly in the face as you turn the

corner. The trees in the park drip mournfully; and a villainous black deposit settles out of the murky air on the evergreens.

How welcome are the flower shops sunny with Mimosa! By March plants are stirring in their sleep and throwing up stiff little fountains of sweet smelling earth; they push their way through sturdily and the narcotic fragrance of the yielding soil fills the air. Snowdrops, dwarf Irises, Crocuses, Anemones, the blue spires of the Cretan Chionodoxa, or Glory of the Snow, the Squills of Spain and the Tyrol, the Grape Hyacinths of Central Europe, and other bulbous plants are treading on one another's heels. Already the rock garden is daubed with splashes of colour, the more vivid because there is hardly any green visible as yet.

Before the end of March, the Daffodils are flowering and throughout April and May they are the glory of the wild garden. So universal is the cult of the Daffodil—second only to that of the Rose—that a special Daffodil Show is held in London each April. *Narcissus*, *Pseudo-Narcissus* the common Daffodil, or Lent Lily, grows wild in Britain; or did. But most of our favourite species come from the Mediterranean region or from Asia.

We depend almost entirely on bulbous plants for our early spring display. But there are few wild bulbous plants in this country, or indeed in any

SHRUBS AND TREES

country where the soil is cold, the air moist, and the sunshine tepid. We have to depend on the waterless summer Mediterranean lands and the Near East for bulbs. Is it not remarkable then how well they do here, though we can so seldom offer them the baked earth they crave!

April ushers in a spate of Himalayan and Chinese Rhododendrons, bearing hemispheres of fiery scarlet, crimson, purple, yellow, and white flowers.

Forsythia suspensa is another engaging shrub; and the mauve bob-headed *Primula denticulata* crouches beneath leafless trees, with blue *Anemone blanda* and the dazzling scarlet *A. fulgens*. The *Primula* is Himalayan: the two *Anemones* came from southern Europe.

Many of our early spring flowers are so familiar, coming as they do at a lean season, that we are sometimes apt to think of them as English flowers. But a moment's reflection will convince us that, not on our wildest expeditions into the hills and woods of England, do we ever see them growing wild. They are common enough in gardens and parks; they have not even naturalized themselves in our hedgerows. They still retain, for all their apparent simplicity, the grand foreign manner.

But while we have every reason to be proud of our gardens and especially of our winter colour effect, it would be absurd to disparage our own wild flowers.

THE ROMANCE OF GARDENING

It is to be hoped the alien will not elbow them aside altogether. Who for example would not go into rhapsodies when he sets eyes for the first time on a Foxglove! and learnt its delicious name! Would that those responsible for naming new flowers had a like ingenuity and appreciation of the beauty of language. Foxglove is charming, partly because, unlike Turkscap and Monkshood, it is not obvious. But be its name what it may — and it is one of the lucky ones — any man might be proud of discovering the first Foxglove and introducing it to his fellow men; whereas to us familiarity has bred, not contempt exactly, but indifference. All our English flowers grow on the continent of Europe, and many of them in Asia as well; so that the first invaders did not see much which was new to them. Nevertheless many a modern invader sees flowers growing wild in this country which he has never seen before. He must therefore derive deep pleasure from a first sight of Snowdrops, or a carpet of Bluebells, a copse filled with Primroses and Wood Anemones, or a hillside golden with Gorse or dabbled with purple Heather. Many other English wild flowers are quite beautiful enough to vie with anything in the garden, did we need to grow them here. Indeed many of them have found an honoured place, as Honeysuckle, and Marsh Marigold; to which might be added Meadowsweet, and Loose-

SHRUBS AND TREES

strife. But all these come to us at a time when we have an infinite number of beautiful flowers to choose from. By June the garden is a sea of colour, ruffling and changing with every passing breeze. Irises, Lilac, Laburnum, Tulips, Sweet Peas, Azaleas, Magnolias, Lilies, Roses, and hundreds more. It is a pageant of colour. Every country in the world has sent its quota to swell the rainbow flood. There are Irises from Persia and Turkestan, Azaleas from China, Lilies from Japan and America, Escalonias and Tropaeolums (Nasturtium) from South America, Cinerarias and Gladiolus from Africa, Clarkias from the Pacific coast, Pentstemons and Phloxes from the northern United States, and a host of other plants, not forgetting Delphiniums (and their annual equivalent, Larkspurs).

By August the flood has spent itself somewhat, and exhausted by its violent fecundity, the garden settles down to a sedate sort of middle age. Indeed a mythical belief has become current amongst gardeners that there is nothing in the garden after July; consequently they lose interest. It is true the great push is over; it is also possibly true that from now onwards more plants go out of flower than come into flower. But nevertheless it must be a very exceptional August which does not produce an abundant crop of bloom. Many plants from the southern hemisphere flower now. New Zealand has given us the

THE ROMANCE OF GARDENING

peerless *Plagianthus Lyallii*, while from Chile come several fiery shrubs such as *Desfontainea spinosa*, and *Philesia bucifolia*. One can imagine William Lobb, who introduced these two, standing in awe for the first time in his life, before a forty-foot tree of *Desfontainea*, in the Chilean Andes; its dark Holly-like leaves reflecting the glow from hundreds of red hot tubular flowers. He might well have been struck dumb. Some of the South American Fuchsias are also in flower, their branches dripping arrested crimson and violet drops, which sway, and tremble, but being held by a thread, do not drip to the ground.

Thus there is little truth in the contention that August is a blank month in the garden. Late summer flowers are always valuable, and it is that quality which makes *Primula Florindae* so acceptable; but only because as compared with June, flowers are in less variety. The fact is, habit sends us away in August, so that we see less of our gardens, and certainly care less what they look like; an indifference which is often carried over into September.

After the definite lull in August, there is a sudden flare up again in the autumn, before the curtain slowly and finally descends. Michaelmas Daisies, Salvias, and Golden Rod, run riot in the herbaceous border; on the rock garden, the lovely *Viola pedata*, Autumn Crocuses, Evening Primroses, and the

SHRUBS AND TREES

comparatively new Chinese and Himalayan Gentians speed the parting summer. There are also Dahlias.

In November and December there are naturally not many flowers, except in the mildest parts of the country; even there, it is thanks to the aliens in our midst that we can still enjoy colour. In the bleaker parts, we must depend chiefly upon berries, and happily there is no lack of them. The Barberries, Viburnums, Cotoneasters, and Briars furnish a wealth of berries from sealing wax to brick red, and vermilion. The large flask-shaped hips of *Rosa Moyesii*, or *R. setipoda*, for instance are most remarkable. Some of the Barberries have blue-violet berries and so also do some of the Honeysuckles. Foliage too, both evergreen and deciduous, helps to enrich the landscape. Here again there is always room for more. Thus the plant hunter, in a narrowing world, still has about nine months of the English climate at his disposal. It is of little use to discover a new plant to brighten Britain's early summer. Unless it is of surpassing loveliness, it will merely congest still more the congestion, and be lost for ever in the crowd. But an early spring flower, a late summer flower, or best of all a winter flower — even a winter berry — is another story. Our gardens, our parks, our roadsides, and our cemeteries will always look the better for more winter colour.

THE ROMANCE OF GARDENING

There is a certain irreconcilable conflict between man and his environment. The earth is overstocked with vegetation; and until man begins to select and destroy, he can find no place to rest his head. An agricultural community must destroy on a grand scale, in order to cultivate what is needful; thenceforward it wages perpetual warfare against the Bolshevik menace of encroaching weeds. How destructive man still is, can be seen in its more primitive aspect in the mountains of Burma and Assam. Whole hillsides of primeval forest are destroyed annually by sword and fire, to make room for meagre crops. By the end of the year the soil is exhausted and overgrown, not with the original forest but with a rank growth of weeds. So aggressive is this secondary growth that it will be eight years before the land can be cleared again and another crop raised. During that delay, eight more forest areas must be destroyed, and cultivated to enable the village to survive; when the rotation begins again. Thus the steep hillsides become a queer patchwork of primeval forest, secondary growth, in various stages of adolescence, and cultivation. Land once cleared never goes back to the original forest; it is never allowed to. It might, if left to itself, gradually return to forest in the course of a century; but it will not have the chance.

The greater part of China must once have been



Bamboo Jungle. 4,000 feet. Burma Frontier

SHRUBS AND TREES

covered with forest; now it is covered with paddy fields. Another method by which men continue to upset the natural equilibrium of plant life is by burning the grass off each year to ensure good grazing; thus permanently keeping down the woody vegetation. This also is extensively practised in the hill country of India, and elsewhere. No effort is made to raise crops: the action is entirely selective, to favour one kind of vegetation at the expense of another.

But if man in his agricultural condition substitutes one form of vegetation for another, in his industrial condition he destroys all vegetation. Factories and mines and the mechanism of fast transport are not consistent with the yield of mother earth. In highly industrialized and densely populated areas, there is no room at all for primeval forest, or even for cultivation. Food is transported from outside. Not until the vegetation has been annihilated is industrialism possible. This is the middle state. At either end of the scale are other relationships between man and his environment. In some parts of the world the vegetation is so vigorous, the momentum of fecundity so dynamic, that man cannot prevail against it. Such regions remain, and may ever remain, uninhabited. At the other end of the scale is a condition where mother earth yields no return; and the desert is as devoid of man as it is of vegeta-

tion. The thickly populated parts of the world are just those where man has complete mastery over the vegetation and can control it according to his needs. It is to these happy lands that the products of other lands are brought, for pleasure or for profit. Man in fact moves vegetation about the world wholesale, seeking where this can be profitably grown, where that; and selecting the most beautiful plants for his delectation. This in the teeth of Nature, who set bounds to the distribution of each species. Every habitable land has seen enormous changes wrought by man. Thus we see Brazilian Rubber growing in Malaya, South American Coffee in Kenya, and Tobacco everywhere.

In the course of two centuries, the face of England has been utterly changed. Our forests have been cut down, our meadows built over, our marshes drained. Many English wild flowers have been hunted to death; others are on the verge of extinction; more are imperilled. But this inevitable destruction has gone hand in hand with a fine appreciation of what is beautiful. In the Golden Age — whenever that was — England may have been gay for six, possibly for eight months in the year; but it was dull, foggy and sallow the rest of the time. If we have, in the course of our operations, destroyed some of our flowers, and driven others into exile, at least we have set aside sanctuaries for what remain. We have

SHRUBS AND TREES

beautified our darkest cities with parks, planted our vibrant speedways with trees, turned our fields into gardens, and patiently explored the whole earth for new and better flowers to grow. England is now an infinitely more beautiful country than it was two centuries ago. Indeed, no comparison is possible. Here and there certainly it is disfigured by slums and beauty spots: here and there it deserves the insulting epithet 'trim'. But on the whole, and taken all the year round, thanks to the energy of man, there is to-day a generous beauty in England such as it has never known before.

CHAPTER VI

FLOWER SHOWS

CASUAL visitors to our great flower shows sometimes ask themselves what nurserymen and amateurs alike are aiming at; if indeed horticulture itself has not taken charge, and is leading us by the nose. The answer must be evasive; for horticulture has no ultimate goal in view. It just goes on, making an ever wider appeal as a pleasant, restful and healthy occupation for leisure hours. In its higher flights it is also a highly skilled science. But there are surprising cross currents in the general stream; and it might be interesting, though perhaps unprofitable, to inquire what our gardens and flower shows will be like fifty years hence. We may note in passing that the growth of the Royal Horticultural Society, at first nominal has now become phenomenal. The Society was founded in 1804. At the centenary celebrations, his late Majesty King Edward the Seventh opened the new Hall in Vincent Square, the Fellows of the Society then numbering about 8,000. Within twenty years, the Society had tripled its membership and had so far outgrown its home that new premises were urgently needed; and a

FLOWER SHOWS

second new Hall was opened in 1928. Two events are chiefly responsible for giving this great fillip to the Society. One was the founding of the R.H.S. Garden at Wisley in Surrey. This garden is not a rival, but a supplement to Kew. It is a horticultural, not a botanical, garden; Kew is, or ought to be, first and foremost, a botanical garden. The other event was the revival, at the beginning of the century, of plant hunting, and particularly the opening up to western gardeners of interior China. As a direct result, first and last, there have been introduced into Great Britain in the past thirty years, about 6000 new species of hardy plants, which is about half the entire number of hardy plants cultivated! We may count ourselves lucky to have lived during this period, and to have seen so great a floral wealth revealed. As already remarked, people have been introducing plants into this country for centuries; but all the previous centuries, and all the devotion and skill of a score of famous travellers, botanists, and plant collectors in the nineteenth century, have not sufficed to introduce more plants than have been introduced during thirty years of the present century. At first sight this seems an astonishing statement to make. Japan, New Zealand, South Africa, and South America had all sent their quota to Britain before the exploration of West China began. Nevertheless this does represent something

THE ROMANCE OF GARDENING

like the relative superiority of China in hardy plants. Moreover many of the earlier collectors were largely engaged in collecting orchids and other greenhouse plants. It is only fair to add however, that practically all the introductions of the nineteenth century have stood the test of time, and are more popular to-day than ever before. I doubt whether we shall be able to make the same boast of the twentieth century introductions! With the astonishing growth of the Royal Horticultural Society, the number of plant nurseries has increased enormously. Never were there so many nurserymen as there are to-day, or so many plants on the market. For that matter never were there so many skilled amateurs. Naturally the competition is keen, and the efforts to tempt the public with novelties, unremitting. These efforts are mainly directed towards three ends: the doubling of flowers; an increase in the size of the bloom; and the introduction of new colour into the genus. And these endeavours are assumed to support the plant breeder's claim, that his one object is to improve plants!

Now no one will deny that many plants have been vastly improved from the garden point of view by cultivation. Even by the middle of last century much had been done. The doubling of Roses and Carnations: the increase in size of the Sweet Pea: the creation of new colours amongst Tulips and

FLOWER SHOWS

Hyacinths, are good examples of the plant breeder's skill. But in the effort to introduce novelty at any cost, quite apart from aesthetic values, the most dreadful abortions are also offered to the public. There can be no merit, for example, in a doubled Sweet Pea, or a doubled Iris. These flowers owe much of their charm to their peculiar form, a certain graceful arrangement of petals, and to double them is obviously to annul these strange outlines, to socialize them down to the level of the average flower. So too an unlimited increase in size, however remarkable, is not necessarily an improvement. A Rose as large as a cabbage would be no more beautiful than a Cabbage Rose; and while there is no logical reason why a yellow Sweet Pea should not be beautiful, it is certainly not for its beauty, but for its novelty, that it would sell like hot cakes; and it is for the sake of its selling power rather than for its interest that efforts have been made to produce one. Certain people react to particular flowers. It is not a question of form and colour. The same form and colour could be stamped out of paper, but it would not produce a like effect. Flowers are symbols rather than objects — the cruder word is ju-ju. They stand for something invisible. Herein lies just the difference between a garden and a botanic garden. Not that a botanic garden cannot be beautiful. Everyone knows that

THE ROMANCE OF GARDENING

there are delicious views and vistas at Kew. So too, some flowers definitely impede certain people; and any man who wishes to make a garden, which will lull him and minister to him when he is spiritually down and out, must first understand his own reactions to flowers.

What the layman does not quite realize is that these 'improved' plants are really sick plants — sick from the plant's point of view and from nature's. Their natural functions are in abeyance, and though the plant exists, it can only be kept alive and increased by artificial means. Such plants have been sterilized not because they are unfit, but because we regard the freak as an improvement on the normal. And so, for a particular purpose, it may be. But this must not blind us to the fact that these plants are sick — not diseased but just sick, since their organs do not function normally — functional disorder the doctors call it. Of course, man interferes with animals for his own ends, in exactly the same way. No doubt many kindly folk who delight to eat *pâté-de-foie-gras*, hardly realize as they consume their *pâté*, that what they are protecting is the deliberate torture of geese by malnutrition. Possibly they think that *pâté* is the liver of a well-fed goose; whereas it is in fact the hopelessly diseased liver of over-fed geese; and the forcible feeding of well-fed geese, which results in putting a vital organ like the

FLOWER SHOWS

liver completely out of gear, is in plain language torture. And it is much the same with flowers. To overfeed them, till their reproductive organs no longer function, is obviously to abuse them. We need waste no silly emotion over the torture of plants; plants may have feelings, but they have no consciousness. Even the British people, swept by periodic gusts of sentimental sickness of a spasmodic kind have not yet thought fit to organize a society for the prevention of cruelty to plants. But as an abstract idea, this consideration of the *plant's* feelings is highly diverting. I commend the notion to that humourless society, the S.P.C.A. A Paeony for example, is neither more nor less than a eunuch. A Rose by any other name would smell as sweet, and would be equally impotent. What happens when a flower is 'doubled' is that the stamens, and possibly the styles also, are turned into petals. Most of our doubled flowers are of the primitive type: that is to say, the petals are free, the stamens numerous (as in the Poppy), and frequently the pistils also (as in the Rose). It is not so easy to double a flower which has the corolla in one piece, with a fixed (and limited) number of stamens — say a Gentian, a Primula, or a Rhododendron. The Chrysanthemum and the Dahlia are different. The original wild flower belongs to the Daisy family, and the 'flower' really consists of an aggregation of small,

THE ROMANCE OF GARDENING

but complete flowers arranged in a head. These may be of one kind only, or of two kinds — the 'ray' (commonly as in the Daisy, called petals) and the 'disc' or centre. Usually the 'ray' florets are sterile, the 'disc' florets hermaphrodite. In the autumn-flowering Chrysanthemums, derived in the remote past from the Chinese and Japanese *C. indicum*, all the central or disc florets of the wild plant have become ray florets with a strap-shaped instead of a tubular corolla. Quite a number of Compositae have only ray florets (or flowerlets — little flowers), while some have only disc florets; but a majority of this immense family have both.

I freely admit, even against my better judgment, that the art of the plant breeder has improved many flowers. The Rose has undoubtedly gained something by being doubled; but it has also lost something. The most ardent Rose enthusiast cannot deny beauty to the wild Briar, or to a single Rose such as Mermaid, or Dainty Bess, and it is a beauty the other lacks; we should be the poorer without them. The chief failing of the single Rose is that it does not last long. Again, there is infinite refinement in the dense brush of stamens we see in *Eucryphia pinnatifolia* for example; it would outrage the virginity of that pure flower to turn these filaments into crowded petals. So too, the flower of *Meconopsis betonicifolia* is like a blue crock of gold, thanks to the

FLOWER SHOWS

sheaf of nodding stamens which cluster round the style. But so long as they keep within bounds, those who sterilize plants do no great harm. Many plants undoubtedly grow much better under cultivation than they do under wild conditions. Fed and properly looked after, their rivals kept under, they are apt to flourish wonderfully. Life in the wild is a cruel thing. The Sweet Pea for example is a gross feeder, and if fed to its heart's content, look what it does for us! But let no one suppose that even the Sweet Pea has done no more than grow tall, and segregate into a variety of colours. It has not doubled itself, thank goodness: if it did that, thereby losing all its quaintly beautiful outline, we might well despair, and return to the wild weed; it *has* lost shape, and thereby lost caste. The flower is larger, but the parts are now disproportionate. One need only examine a champion Sweet Pea to see that this is so. The sails, standard and wings, have expanded widely, and the little keel has not grown at all; indeed it is entirely hidden under the bellying wings. No keel so small as that could possibly carry such a spread of sail: it would capsize instantly. Hence there is already something wrong about the look of a Sweet Pea: and assuredly the fanatics will not rest until they have sunk it. Another aim of the plant breeder and horticulturist is to bring out new colours latent in a flower, or breed in colours which

THE ROMANCE OF GARDENING

are not there. Now the English, rightly as I think, hunger and thirst after colour. England is a grey and colourless island set in the mists of the North Sea, and colour maketh the heart glad. Consequently any additional colour is to be welcomed. But whether our future happiness depends upon the discovery of a yellow Sweet Pea, or a yellow Aster (*Callistephus* — *not* Michaelmas Daisy) or a blue Rose, I am not prepared to say. That is more a matter of taste. Unfortunately this search for colour has led us into the search for colour schemes, and other vile vices.

It is odd how rapturous the English become over flower shows. Perhaps it is our combative and competitive spirit peeping out even amongst these innocent surroundings. Frankly, our flower shows are not good, though it is very difficult to see how they could be improved upon. They are far too crowded with flowers; a disadvantage we owe to the circumstance that we have too many flowers. The nurseryman is the one tradesman who, apparently, must put all his goods in the shop window. This seems strange when one realizes to what varied uses we put flowers. From the day of his birth — when his future godfather or godmother sent him a bouquet, to the day of his death, when his corpse will be well and truly hidden beneath them, the Englishman is surrounded with flowers. They are

FLOWER SHOWS

the one universal form of decoration in the house. Every dinner party is a special occasion for floral display; every wedding is an orgy of flowers, being the climax to a courtship in which flowers stand for unspoken words. Nurserymen undoubtedly feel that a plant on view is the best advertisement, and that a plant not on view is held to be non-existent. The gardening public buy plants which they can touch and see, and the best seller is often the outstanding new plant. But of course it is entirely a matter of degree of novelty. No doubt a nurseryman must display something. But one rarely sees such everyday plants as Mignonette, Sweet William, or Love-in-the-Mist, on view; yet one may be sure that seeds of these plants are sold in large quantities every year.

After how many years acquaintance does a plant cease to be new? The nursery catalogues — those mines of misinformation — still call *Meconopsis betonicifolia* (or rather *M. Baileyi*) the 'new Tibetan blue Poppy', and both *Primula Florindae* and *P. alpicola* are still included under the heading 'new Primulas from China!' (They were discovered in Tibet in 1924. But nurserymen know that Primulas come from China; these are Primulas; therefore they come from China. It is unfair, almost indelicate, I suppose, to find Primulas in Tibet, and hardly good for trade). *Gentiana Farreri* and *G. sino-ornata* are described as 'new' to this day. For new read 'rare' —

THE ROMANCE OF GARDENING

comparatively. Twenty years from now perhaps the novelty will have begun to wear thin; then other plants which have been waiting for their opportunity will occupy the coveted position, and the old brigade will be pensioned off.

But the real criticism one must level at our flower shows is exactly the same as the criticism one makes of pre-war gardens; that is, their crowdedness. One cannot see the plants for the flowers. There are too many plants, and far too many flowers. Nothing is left to the imagination; down to the smallest detail everything is shown. The result of this is not only a loss of form but a loss of colour. We all know that white light is made up of the combined colours of the spectrum; and the crowding of so many coloured flowers into a small space gives from a distance a curiously anaemic effect; not a colourlessness so much as a tonelessness. It is only at close quarters that the colours stand out a little. There is no background. The same is true of form. In the crowded arena all individual form is lost in the joyous amorphousness. The tight bunches of Sweet Peas are simply posies; even the Irises, except, perhaps the stiff 'Spanish' Irises, have surrendered their shape on the altar of mass production. Flowers are displayed as just so much raw material for decorative purposes; and, with few exceptions, scarcely a hint is given as to what can be done with them. Nor does any

FLOWER SHOWS

suggestion of wider possibilities enter into these floral orgies. It would be interesting to stage a *geographical* flower show. This suggestion was made by the Secretary of the Royal Geographical Society, in a letter to the *Observer* some years ago. Why not hold a flower show to display the floral wealth of the new world, for example, as contrasted with that of the old world? One which would exhibit the Fuchsias, Tropaeolums, and Calceolarias of the Andes, as opposed to the Primulas, Poppies, and Gentians of the Himalaya? Surely that would interest hundreds of people who never give a thought to the geographical distribution of plants! It would start new trains of thought, stimulate a new interest in plants, and put an even keener edge on gardening. It would also give a new angle to geography. Few people know that the flora of eastern North America bears a close relation to that of China. Fewer still know that the flora of the southern Andes bears some resemblance to that of New Zealand and Tasmania. Why not stage a flower show which will emphasize and drive home these unexpected relationships? But probably the most dramatic effect would result from contrasting the most different; the flora of the Rockies, compared with the flora of New Zealand; the flora of the Chilean Andes compared with that of the Himalaya: Southern Beeches, Lapageria, Embotrium, as against Rhododendrons, Honeysuckles

THE ROMANCE OF GARDENING

and Maples; or the Crocuses, Tulips, and Irises of the Mediterranean region as against the composites, Heaths, and Mesembryanthemums of South Africa. Of course there are certain difficulties, the chief being that the most typical Asiatic plants are not in flower at the same time as the most typical plants from the southern hemisphere, but this could be got over.

The autumn show of the Royal Horticultural Society is really a far more reliable test of the skill and progress of horticulture in this country than the great spring show which attracts so many thousands to Chelsea during the London season. We all know well enough by now that we can grow flowers in England in the summer. In a sense we hardly need to do so, for it is in the summer that England has a beauty all her own; we but gild the Lily and paint the Rose. There is colour in every English lane in May and June, though I am far from deprecating the instinct which cries aloud for more colour, and which turns our gardens into lakes of ruffled lava and pools of liquid turquoise. But with the long penance of winter threatening the country, late autumn brings no such assurance that the colours will not fade. Our own country can produce little beyond the scarlet beads of Holly and the white pearls of Mistletoe. With these alone we should fare poorly. How cheerful is it then to walk into the airy

FLOWER SHOWS

new R.H.S. Hall at the end of September, and to see the stands softly twinkling with the silver blue and gold plumage of conifers against a smouldering background of scarlet and orange Firethorn (*Pyra-cantha*). Then there are the deciduous trees with flaming colours to symbolize the sunset of the year; these carry the tradition of colour on into the October twilight, until the night of winter sets in. At the last we have to depend on the evergreen shrubs, whose leaves, however, are other colours besides green; and there are many greens. Nor is this all; for there are lingering flowers still, late bloomers which help to bridge the ever lessening gap between autumn and spring. Michaelmas Daisies vie with Dahlias and Chrysanthemums: nay there are even Roses in all their glory, and Clematis, and Prunus.

October comes, and the garden gives a last flicker before the colours finally fade and die away. Then November, and winter is upon us. But our evergreens and clustered berries, more clearly visible now that the last leaves have been wrenched from the twigs, carry on well enough till Christmas. How welcome is the turn of the year! For a short space maybe the earth seems locked in sleep, even in the last long sleep. But the crisis is soon past. Before the end of the January cold, the earth is beginning to yield up her hidden treasures. Already there are Rhododendrons in bloom; nor should that surprise

THE ROMANCE OF GARDENING

us, since it is a commonplace in the eastern Himalaya, to see stout Rhododendrons trees frothing into flower from every limb while standing, with leaves dejected, in a foot of snow. The calendar may tell us that spring officially begins on March 21st, but our gardens (thanks to the overseas invasions) no longer listen to official pronouncements, however weighty. They tell us nowadays spring begins in February, and we listen to them kindly; for they say it with flowers. Our cities now are happier than the country, for the flower shops and markets are crowded with flowers, and many a gay buttonhole is sold in the wind swept streets. It is in our houses too, rather than in the garden, that flowers bloom most freely. It is the season for bulbs — Hyacinths, Lily of the Valley, and others. But neither are our gardens long bare. Clusters of egg-yellow, purple, and white Crocuses pierce the lawn. Snowdrops are hanging over the grassy banks like cold white star-shells. Winter Aconite, and the rapturous blue of *Chionodoxa* vie with early Daffodils yellow as spring sunshine, and the bare scented whiteness of *Viburnum fragrans* and pallid Forsythia. These usher in the early spring; and although our flower shows, crowded with flowers as they already are by February, mislead the layman (for the bulk of the plants seen here are forced) yet they are a glad sight.

All this then we have done for ourselves, nursery-

FLOWER SHOWS

men and gardeners, amateur and professional, and certainly not least, plant collectors. But much remains to be done.

Those who cavil at the introduction of foreign plants on to the sacred soil of England, might well ponder these things. That environment greatly influences mankind, history (or perhaps I should say geography) proves; and I should like to see England made beautiful for all of us, those who dwell in town no less than those who dwell in the country. The innate chivalry of the English is largely due to the silent influence of beautiful surroundings, and only a land beautiful to live in is worth striving for.

CHAPTER VII

THE GEOGRAPHY OF THE GARDEN

ABOUT 12,000 species of foreign plants are cultivated in the gardens of Great Britain, and the number is steadily increasing. Not all of these are hardy anywhere in the British Isles; but all of them are hardy somewhere in the British Isles. Probably nowhere else in the world is there an equal area of land where so many different plants can find a congenial home. So far as the hardiness of plants is concerned, Britain may be divided into two almost equal areas. The division is not, as might be supposed, into a cold northern and a warm southern half: but into a moist relaxing western and a dry bracing eastern half. If we draw a vertical line through Edinburgh, prolonging it north and south, the country to the west of the line may be regarded as moist, the country to the east as dry. The temperature of the western half is the more equable of the two, being on the whole warmer in winter and cooler in summer than the eastern half. Thus we can regard Britain as being still joined to the continent. West of the line is simply part of the western seaboard of Europe; east of the line is continental Europe. The North

THE GEOGRAPHY OF THE GARDEN

Sea has hardly any effect on the English climate.

Or, we might divide the country according to soil: limestone (or chalk) soil — and non-limestone soil usually called calcareous and non-calcareous soil. The chalk belt extends in a north-east to south-west direction across Britain as a broad band from the coast of Yorkshire to the coast of Hampshire. All outside this belt is non-calcareous, and most of the country within it is calcareous; though actually the chalk has been removed over a considerable area. Plants may be broadly distinguished as lime tolerant and lime-haters; a certain number are indifferent. But whereas we can to some extent control our soil we cannot control our climate; so that this second classification is not nearly so important as the first.

Before considering in more detail whence this great family of hardy plants has been derived, let us look at the matter from a general point of view. The land surface of the earth covers about 58 million square miles, and is made up as follows:

Arctic Regions	3	million	square	miles
North Temperate Zone	26	„	„	„
Tropical Zone	20	„	„	„
South Temperate Zone	4	„	„	„
Antarctic Regions	5	„	„	„
	—			
	58	„	„	„

These areas, however, assume the lands to be

THE ROMANCE OF GARDENING

level, whereas, of course, we know that they are not. The greatest mountain ranges in the world lie mainly in the temperate zone and actually increase the area of that zone by a considerable, though unknown, amount. If we leave out the polar regions, the temperate zones, north and south, account for thirty million square miles out of fifty, or 60% of the land surface of the world; the tropical zone accounts for 40% of the remaining land surface. For the whole earth, approx. figures are: frigid zone 14% temperate zone 52%, torrid or tropical zone 33%.

Thus Britain, lying in a favoured part of the north temperate zone, not too far north, nor yet in the unpleasant sub-tropical or warm temperate region, is peculiarly well placed to satisfy plants from almost any part of the temperate land area of the globe. Only two other considerable lands are perhaps equally well placed; Japan, also in the north temperate zone, and New Zealand in the south temperate zone. Both are larger than Great Britain. New Zealand has about 1500 species of flowering plants, or fewer than Great Britain; but Japan has over 4000 species, probably twice as many as Britain.

I have spoken as though only plants from outside the torrid zone could be grown in Britain, and in general terms that is true. But it must be remembered that there are high snow-clad mountains even in the torrid zone, and that some of the plants from

the summits of these high tropical ranges have been grown in English gardens. This, however, is rather exceptional. Let us confine ourselves therefore to the temperate lands of the earth, where most of the greatest mountain ranges also run.

Surveying the flowering plants of the world as a whole, we find that certain groups of families and genera occupy fairly definite land areas; and are either partially or completely lacking outside those areas. A single species naturally has a restricted range, that is, it occupies a very definite and usually small area, though it is surprising how little we really know about the actual distribution of each species. A genus, comprising several or many species, has a wider range. A family, usually comprising many genera, has a still wider, and often universal range: it may be confined to the tropical belt, or to the south or north temperate zone, but probably it girdles the earth in that zone.

If we examine the great land masses separately, we find that each is inhabited by certain families of plants forming an assemblage peculiar to itself. Every continent actually comprises at least two plant assemblages; Africa contains three; Asia four. This is due to the subdividing of the great land masses by deserts and mountain ranges, as well as to their spreading from the temperate into the tropical zone. One or other family of the assemblage may occur

THE ROMANCE OF GARDENING

elsewhere; but the whole assemblage is not repeated. Comparatively few families are entirely confined to one area; genera are more restricted; species still more so. The principle is best illustrated by supposing a number of human clans, Smith, Jones, and Robinson, settled in America, and another assemblage of clans, Brown, White, and Black settled in Europe. A young Smith from America, and a young Brown from Europe, go to Africa, where they meet a third clan, Thomas, and form a new assemblage. Other sprigs from the European and American and African clans go off, and start new assemblages. But nowhere else do we find the American assemblage Smith, Jones, Robinson, or the European assemblage, Brown, White, Black, or Smith, Brown, Thomas, as in Africa. There are over three hundred families of flowering plants, and many of the smaller ones have a restricted distribution. Botanists recognize fifteen major floral regions of the world as they are called, several of which have been subdivided. It is important to note that these are floral regions, depending upon the plant families associated in them, and not upon the outward appearance of the vegetation. To the layman, tropical vegetation looks very similar whether in the East or West Indies; yet these islands belong to distinct floral regions. It is evident that isolation plays a part in defining a floral region. There are barriers which plants can-

THE GEOGRAPHY OF THE GARDEN

not cross. The most obvious barrier is a wide ocean; and it is hardly surprising that the flora of equatorial America is different from that of equatorial Africa. But though the ocean is the greatest barrier to the mingling of plants, it is not the only one. It is easy to see why the floras of tropical America and tropical Africa are different; they have developed apart. It is not so obvious why the flora of a continuous land mass such as Africa should not be uniform. Clearly there are other barriers besides the oceans; and climate, too, plays a part! The most effective land barriers are deserts and long ranges of snow mountains. Thus the Cape region of South Africa is isolated from the rest of Africa by deserts, and so forms a separate floral region. India is isolated from Central Asia by the Himalayan range; and Peru is separated from the tropical South American region by the Andes.

This analysis of the world's vegetation is of the utmost use to the horticulturist on the look out for new hardy plants. It gives him some idea of where to look for them. Thus the northern part of North America, most of Europe, and all northern Asia including Siberia, has a fairly uniform flora, and forms a single floral region. Almost any plant which grows in that vast expanse would probably be hardy in Britain. Of course, not every plant would be worth growing.

THE ROMANCE OF GARDENING

It might be supposed that Europe at any rate would possess a uniform flora. Yet anyone who has ever travelled from London to the Riviera must remember waking up in the train next morning and looking out on to a wholly unfamiliar landscape. The least observant, in fact, can hardly fail to notice how great is the contrast between say a typically English country district, or even that of northern France, and that of the Mediterranean coast. This contrast is largely due to the difference of the vegetation. Olives, Oranges, Cypress, and Grape Vines, have replaced the familiar Poplars and Cornlands of the Pas de Calais. This same flora forms a belt round the Mediterranean, and is continued eastwards across the Balkan Peninsula, Asia Minor, and Persia to the NW. Frontier of India. So different is the association of plants here from what we are accustomed to see in England, that it is clear there is some fundamental difference of origin. One might indeed ascribe some of the difference in the flora to a difference in climate; and climate has certainly played a part. How small a part, however, can be best realized when we consider the large number of Mediterranean plants grown in English gardens; plants like Lavender, *Cistus Monspeliensis*, *Anemone hepatica*, *Linum arboreum*, and many more.

If on the other hand we travel, not southwards from London, but eastwards, we can cross the con-

THE GEOGRAPHY OF THE GARDEN
continent of Europe and continue across Asia, without noticing any fundamental change in the type of vegetation. We have travelled for thousands of miles, from the Atlantic to the Pacific, without ever leaving the northern floral region. The difference of climate between western Britain and the interior of northern Asia, is actually greater than that between the 'Cornish Riviera' and its older rival; but the floras are nevertheless much more alike. This shows what a secondary part climate plays in altering the flora as a whole.

I have spoken of the difference between the flora of the Mediterranean and that of an English scene; but too much stress must not be laid either on such outward differences, or on outward resemblances. The inquiring layman might indeed suspect on sight that the northern European and Mediterranean floras are somehow very different; but he would hardly suspect that the same distinction held good for say the flora of Java and that of Jamaica. Java and Jamaica have a very similar climate. In both islands he would see Palms, Bamboos, and a wealth of climbing plants — creepers, people call them — and epiphytes, often wrongly called parasites; these and other hall-marks of the tropical forest would rivet his attention on their general similarity of appearance, though he would quite miss the subtle differences obvious only to a trained observer.

THE ROMANCE OF GARDENING

But different they are. The Palms are different Palms, the Bamboos are different Bamboos, and most of the trees, climbers and epiphytes are different in Java and Jamaica. Clearly the floras of the New and Old World tropics have been long separated. Their origins are dissimilar; nor have they been able to mingle in later life; but similar conditions have set a common stamp on them. I have said that mountain ranges usually separate one flora from another. For example the European Alps separate the northern temperate flora from the Mediterranean flora: the Himalaya separate the Indo-Malayan from the Central Asian; the Andes separate the Pacific coast flora from the tropical South American; and so on. But while mountain ranges separate the floras on their flanks, they connect the floras at their ends; that is, they are bridges as well as barriers. When the mountain system is of great extent, and sufficiently lofty, it usually possesses an alpine flora all its own. Even isolated mountains which rise from a common plateau, like those of equatorial Africa, may have a common flora. This mountain flora however cannot grow in the low country between the high African peaks, so that it is discontinuous.

I have expounded at some length these first principles of geographical botany because it is only by realizing the immense variety of the world's

THE GEOGRAPHY OF THE GARDEN

flora that we can appreciate what a botanical garden Britain really is. If we omit the tropical belt, one may say that plants from every other floral region are grown in the open somewhere in Great Britain. That includes almost every country outside the tropics. The various floral regions of course take no heed of political frontiers. But in compiling floras of unit areas, botanists find it convenient to respect political boundaries. Thus the first regional floras are those which, like the flora of the British Isles, and the flora of the Malay Peninsula, deal with political units. There are many self-governing countries of which no flora exists; others are incomplete. When the flora embraces a large area such as British India, exploration is continually adding to the plants known from that area. It is a mistake to suppose that even in comparatively well-known lands, no more plants remain to be discovered. There can be no question but that thousands of species of flowering plants, including possibly dozens of genera, still remain to be discovered in different parts of the world. Thus new editions of floras, or at any rate supplements, are periodically needed; lists of plants need constant revision. Some of the most prolific areas are still without floras. Thus no one has yet essayed that gigantic compilation of the future, a flora of China.

When the flora of a country — such as England —

THE ROMANCE OF GARDENING

has been completed, the next step is to compile smaller unit floras, in this case county floras. Beyond that, amateur botanists can amuse themselves compiling local district floras. Accurate and complete floras are the foundation of geographical botany.

CHAPTER VIII

ALPINES

THE outstanding contribution of England to gardens is, as already noted, the rock garden, which is pre-eminently a home for hardy plants. Rock gardening at the moment is enjoying a special boom of its own in this country, so much so that there was recently founded an Alpine Garden Society to look after the interests of some eight or nine hundred enthusiasts; and this despite the fact that it is one of the most expensive forms of gardening. It is, however, impossible to say just what the Englishman means when he speaks of a rock garden, except that it is the place where he grows plants by, with, or from a rock.

In modern horticulture 'rock plant' is synonymous with 'alpine'. This is a mistake. An alpine is strictly speaking a plant which habitually grows above the tree line; a rock plant can grow on a rock anywhere — there are plenty of rock plants in the hill jungle of Burma, and still more in the temperate rain forests of the Indian Frontier; for instance Begonias and blue Chiritas, with lop-sided leaves and flowers like a Foxglove.

THE ROMANCE OF GARDENING

But the plants which can properly be grown in the rock garden comprise a good many others besides both rock plants and alpines. Even shrubs — especially Rhododendrons — and small trees, tall herbaceous plants, bog plants, and aquatic plants may legitimately be grown in the rock garden if it is sufficiently large and sufficiently diversified. For the rock garden represents, however inadequately, the mountains; and therefore it should include not only rocks and cliffs, but tumbling brooks and placid lakes, meadows, marshes, screes, and in fact every feature of the mountains. And here we come upon another strangely misused word. Horticulturists have taken unto themselves the word 'moraine' and mishandled it shockingly. A moraine is a term given by glaciologists to a pile of earth and stones which owes its presence to a glacier. It builds itself on either flank of a glacier (lateral moraine) or down the middle when two glaciers unite, this median moraine resulting from the fusion of two lateral moraines. There is also the terminal moraine at the foot of a glacier; and it is this terminal moraine which alone usually survives after the disappearance of the glacier. The raised ridge of a lateral or median moraine is composed chiefly of ice; there is only a film of earth and stones, fallen from above and spread along the edge of the glacier by its own slow movement. The earth and stones protect the ice

ALPINES

beneath from melting — hence the raised ridge. The terminal moraine is simply a pile of rubble pushed along the floor of the valley by the snout of the glacier, as it advances. This mound is left behind by the glacier when it retreats. Thus there is nothing in common between a real moraine, and what is called a moraine in gardening. The fact is, horticulturists have chosen the wrong word. The rock garden moraine is really a *scree* — though it is rarely set at the correct angle for a scree which would be anything from 45° to 60° . It is, however, a scree in so far as it is a stony slope, with sharp drainage, and soil some way below the surface.

An important adjunct of the rock garden, or of any garden, is the alpine house — a convenient term, although other plants besides alpins are grown there. Almost any small plant with gay flowers may legitimately be grown in the alpine house, where you will see, cheek by jowl with the true alpine, semi-desert plants, rock plants and small herbaceous plants, sensitive to low temperatures. The one feature they all have in common is that they need to be kept dry — not necessarily warm — in winter lest they perish. The alpine house is not artificially warmed; it is little more than a roof over their heads.

I have said that almost any plants are meet to be grown in the rock garden provided it is sufficiently

THE ROMANCE OF GARDENING

large and diversified. Even certain trees, discreetly placed, may be allowed; but few rock gardens are so large as to permit of trees being usefully employed, except as a background. Shrubs, however, are fair enough game, even if we regard the rock garden as primarily a place in which to grow alpines.

Let us consider for a moment the most obvious characteristics of the alpine zone, and what their effect on plant life is likely to be. Our definition of an alpine is a plant which grows above the tree line — that is, the altitude at which trees normally grow. Thus the term 'alpine' has nothing to do with altitude. The tree line may be at sea level, or there may be no tree growth at all as in the Siberian tundra, which is then almost equivalent to an alpine region at sea level. So far as alpine plants are concerned, altitude is merely a rough substitute for latitude; in low latitudes alpines ascend to high altitudes and vice versa. Thus in Greenland, the coast is the alpine zone. In Scotland the alpine zone begins at 1000 or 1500 feet; in Switzerland at 7000-8000 feet; in the Himalaya at about 10,000 or 12,000 feet, and in New Guinea at about 12,000 or 13,000 feet. That alpines owe little or nothing to the direct effect of altitude is proved by the fact that plants from 12,000 feet or higher in the Himalaya grow quite comfortably in our gardens at sea level, no

ALPINES

less than by the fact that the same type of vegetation is found at sea level in the Arctic circle and at 15,000 feet in the Himalaya. As applied to plants, then, the term 'alpine' denotes rather a certain type of growth, a certain habit; it does not mean a plant from a mountain top. (On the other hand, as will be seen presently, there is no true 'mountain' habit, or at any rate many plants which do not conform to the typical alpine habit grow in the mountains.) The term 'alpine', then, has, not unnaturally, become almost synonymous with mountain plant; and an 'alpine' is usually regarded as a plant which grows at or near the tree line, sometimes considerably above it, irrespective of where the tree line stands in relation to sea level. We may so use the word here. The same general marks are impressed on most plants, which grow where trees will not grow. I have mentioned arctic plants, and compared them with true 'alpines'. Plants of the icy tundra, growing at sea level, have many features in common with alpines from 12,000 or 15,000 feet in the Himalaya; but similar features might be and indeed often are impressed on desert plants, although one would naturally suppose that the conditions under which they grow are entirely different. In a sense they are, but in effect not; and so the plant reacts in the same way. Hence the suitability of many desert plants — for instance Cactuses from

THE ROMANCE OF GARDENING

Mexico and Mesembryanthemums from the African desert — for our rock gardens.

The chief factors influencing high alpine plants, with the effects they produce, may be tabulated as follows:

Light. At high altitudes the light is intense. Even on a dull day, the rarified air and clarity of the atmosphere ensure a brilliance of light unknown at lower levels. There is also great reflection from the snow. The actinic value of the light is greatly increased, as every photographer notices. There may even be a different *quality* in the light, though this has not been investigated from the point of view of the plant. Light retards growth. Alpine plants are therefore usually compact and stunted.

Heat. The surface soil is subjected to extreme temperatures — though probably not so extreme as is popularly supposed. At high altitudes the sun pierces the thin clean atmosphere with a power quite unrealized by those who have never experienced it, and the heat rays are strongly reflected from the naked rocks. Very high temperatures, *in the sun*, may be recorded on a fine day, at 15,000 feet. Conversely in winter, the surface of the ground gets very cold, and the temperature of the air drops considerably. But it must be remembered that alpine plants are for the most part under snow for five or more months, and that the temperature

ALPINES

under the snow is much higher than it is above it.

The effect of low temperature on plants is to slow down most of the vital processes. Below a certain temperature seeds cannot germinate, leaves cannot function, roots cannot absorb water, and so on. As a result, plants which have to withstand low temperatures for any length of time, must hibernate, since they are unable to feed themselves. They go to sleep. They protect themselves against loss of water by shedding their leaves, or by rolling them up into tubes, which present a reduced surface to the air, or even by dying down flush with the ground leaving only a rootstock or underground stem to persist, and give rise to new growth in the following year. This applies only to perennials, or to biennials in their first year; some alpines are annuals, but curiously enough not nearly as many as one would expect.

Wind. In highly mountainous regions, especially where there are glaciers and snow peaks, wind plays a decisive part. At 15,000 feet in the Himalaya, for instance, and still more on the Tibetan plateau, severe and long continued storms rage with great fury at certain seasons.

The habit of many alpines such as mat plants, rosette plants, cushion plants, carpet plants, and so on, is no doubt partly due to the drying action of wind. The desiccating effect is particularly severe

THE ROMANCE OF GARDENING

when the air is so rarified; consequently alpine plants hug the ground as closely as possible, hiding under the lee of boulders, or in hollows. Many alpines, too, are covered with a cobweb of woolly hairs, which helps greatly to decrease loss of water by transpiration.

Snow. In moist regions, alpine plants are compressed for several months in the year under a considerable weight of snow. The thin carpet, or mat habit, or the sturdy cushion may sometimes be a direct consequence of this mechanical pressure. Plants thus squeezed into two dimensions will often on relief of the pressure, grow in three dimensions; that is to say, in Britain they are apt to form small bushes.

Water. Even on those mountain ranges where precipitation, though not very great, is almost continuous, the water supplies are often deep-seated, especially at high altitudes. This is owing to the gravelly nature of the soil and the steepness of the slopes, which induce quick drainage. On cliffs, water supply is often precarious, and in fact cliff plants (particularly where the rock is granite or even schist) are rather exceptional. Enormous areas of rock are entirely bare of plant life.

It is largely owing to this that alpine plants have an underground root system out of all proportion to their size. Often the tap root is several feet long,

ALPINES

though the plant itself may be only a few inches high. There is, however, another purpose in the long tap root, which is usually soft and spongy: namely, to anchor the plant on a shifting scree. It is a common experience on the great limestone ranges of far western China, to find plants growing on rubble cones which have a general slope of 60° . They are exposed to two dangers: namely, bombardment from above — as rocks are split off the cliff and come hurtling down on them — and a shifting of the substratum in which they are rooted. The scree is always sliding and settling, so that shallow-rooted plants would soon find themselves stranded high and dry on a lee shore. Moreover the water-supply on a scree, whether derived from melting snow above or from rain, sinks rapidly underground to deeper layers where the soil is finer.

Short growing season. Owing to winter cold and heavy snowfall, the growing season on high mountain ranges is very short. On the Burma frontier, for instance, at 12,000-13,000 feet, it lasts about five months — June to October. At 14,000 feet, it may easily be a month less, and at 15,000 feet it can hardly exceed three and a half months.

The shortness of the season is one of several contributory causes to stunted growth. It also accounts for the smallness of the seeds of most alpines — there is no time for the production of large ones. An

THE ROMANCE OF GARDENING

alpine may have to flower, ripen its fruit, and scatter its seeds all within two months, which leaves scanty time for the elaboration of large well-fed seeds. Instead a great number of small ones are produced; and the poor germination of many alpine seeds may be due to hasty ripening — if not to their poor quality, which in turn is due to starvation.

It has been said, and often repeated, that blue is the prevailing flower colour in alpinism — or at any rate in the Alps; and the dazzling Gentians are cited, together with *Erythrichium nanum*. My own experience in the Himalaya and in western China lends no support to the theory. It is possible that blue, when it occurs, is the most *conspicuous* colour in the high alpine zone; and certainly the crimped carpets of incandescent blue Gentians in autumn rivet the climber's attention. But it must be remembered that the Gentians are among the last alpinism flowers to flower in the Himalaya and among the earliest in Switzerland, so that there is not much else to distract attention from their piercing colour. Further, in October, when they are at their best, the sun is shining brilliantly again and the atmosphere is crystal clear after four months soaking rain. Consequently any flowers there are, seem, by contrast, to be the more lustrous. All this helps to emphasize their marvellous colour. In summer, when the big blue bubbles of *Meconopsis betonicifolia*

ALPINES

are dancing over the green meadow in scores, there is no suggestion of blueness. Rather would I think that in these dim misty mountains, the prevailing colour in June, when the dwarf Rhododendrons are seering their way through the veil of rain, is scarlet. I have an idea that flower colour was, in the beginning, a temperature reaction. If you climb to the Tibetan highlands in early spring, when the snow is melting in patches, you find many flowers white or yellow. A little later, when more snow has melted, and the sun has begun to warm the valleys, reds and purples appear in greater numbers. Finally, in late summer, when the snow has gone and the rich earth has lost its chill, blues and violets prevail — Gentians and Cyananthus, Monkshood, Larkspur, and many others.

There is another feature of alpine plants which is worth noting. Owing to the almost continuous rain at high altitudes insects are comparatively rare, considering the vast numbers of alpine flowers. It is true that insects — and spiders — have been found at great heights; nevertheless, compared with their ubiquity in the meadows, insects are restricted above 13,000 feet. It is no doubt partly owing to the necessity for making themselves conspicuous and attractive that so many alpine plants have brilliantly coloured flowers. On the other hand, as we have seen, the season being short, and food sup-

THE ROMANCE OF GARDENING

plies limited by various factors, alpine plants are small, and their flowers sometimes correspondingly reduced. As this would involve their being passed over by insects as of no account, the small flowers are closely compressed into heads; or a tightly woven cushion or carpet is studded with tiny flowers, which in the mass show up plainly. When, as sometimes happens, the individual flowers, though small, are brilliantly coloured, as in *Myosotis Hookeri*, the result is superb. The most numerous insects found in the high alps are diptera, especially Tipulidae ('daddy-long-legs') and tiny flies, which occur in myriads — another example of reduction in size as a result of the short season! There are a fair number of small beetles, and also bees; on sunny days, a few butterflies are sure to be abroad. But flies are by far the most numerous.

As already remarked, although the most common alpine habit is the mat, or cushion, or rosette — all of which cleave closely to the ground, and display both concentration of flower and reduction of leaf and stem — not every alpine is built to this pattern. Species of *Saussurea*, for example, grow up enveloped in a cloud of *wool*; and so do other compositae related to the Thistles. Many alpine *Primulas*, though approaching the rosette pattern in foliage, throw up a sheaf of flowering scapes each year; and the biennial species of *Meconopsis* do like-

ALPINES

wise. A little consideration, however, will show that even these apparent exceptions conform to the spirit if not to the strict letter of the rule.

It is important to note that above about 14,000 feet, alpine plants are rarely gregarious. Small colonies of one or another species may occur, but as one ascends to higher and higher levels, they become more and more scattered. Here plant competes not with plant, but each plant struggles single-handed with Nature in her harshest mood.

Surely it is a most remarkable fact that so many of these vivid alpine flowers, which for countless generations have lived under the exceptional conditions described above, can be literally dragged from their natural home and persuaded to grow placidly in a blameless English garden! Here conditions are utterly different. The growing season is increased by weeks; there is no snow in winter to give them certain rest; in summer, when they would normally be living in a tepid Turkish bath, they are as likely as not being smitten with a heat ray; in spring and autumn they are alternately thawed and frozen.

One of the reasons why certain alpines cannot be grown in the open in Britain is undoubtedly because our atmosphere is too dry in summer. Our damp winters have been accused of much; but nothing is said of our dry summers. Until recently, it is true,

THE ROMANCE OF GARDENING

our summers have been anything but dry. But however wet they have been, they cannot compare in non-stop humidity with summer in the Assam and Burmese mountains. For six months, perhaps, the relative humidity of the atmosphere never drops below 95%, and often reaches saturation point. (These are not exact figures: but I have spent enough summers in those sodden alps to know that between May and October it rarely stops raining!) In England on a hot day, the humidity for a few critical hours may be very much less, and this is a state of affairs which we cannot remedy. We may water the soil as much as we like, to take the place of rain; but we cannot greatly affect the humidity of the atmosphere above it, particularly while there is a tradition that you must not water plants so long as the sun is shining on them. Only along the coast does the atmosphere commonly approach saturation point; and then it is probably owing to the fact that the fine particles of salt in the air attract moisture. We usually attribute the loss of alpines in our rock gardens to winter conditions; they fail to appear in the spring, and we not unnaturally assume that the winter killed them. Its very mildness was fatal. It may have been; but there is no proof that it was. True, some plants have survived the winter (given a little overhead protection, such as a bell-glass) which might not

ALPINES

have survived without that kindly aid; on the other hand many plants have perished even when so protected. But to conclude that because a plant does not reappear in the spring, it must have been killed in the winter, is like believing that the thaw burst the water pipes. The damage may have been done already — in the summer; it only became apparent later. In other words, it is just as likely that a summer drought — particularly such a drought as we enjoyed in 1934, was responsible.

Need we wonder then, that a few sensitive alpines cannot adapt themselves to our strange environment? Even they might yield to our blandishments could we but translate them whole and place them safely under glass. This experiment I carried out successfully in 1932. For in October 1931 I dug up on the Tibetan frontier mats of dwarf Willow and Potentilla, enclosing plants of Gentian, *Primula Dickieana*, and other alpines. These I brought down to the coast packed in wooden boxes between layers of moss, and shipped to England in cold storage. Despite their three months' journey, including six weeks in the tropics; despite their descent from 14,000 feet to sea level; despite all the chances and changes of this mortal life, they survived — for a time. But not for long. The shock was too great. Already they were losing strength, going steadily back all the time. They never flowered. Eventually

THE ROMANCE OF GARDENING

they died. Nevertheless it might be possible to import alive many alpins which we are unable to raise from seed.

I alluded above to the similarity between many alpine, arctic, and desert plants — the stunted growth, reduction of stems and leaves, and rosette habit. It is evident that this common form must be due to some common factor. If we can discover what that factor is we shall have gone a long way towards unravelling the secret of the alpine habit. The parallel between alpine and arctic is fairly obvious — the shortness of the growing season and the coldness of the soil are common to both. In the desert different causes produce the same result. Here the shortness of the season is due, not to a cold soil but to a *dry* soil. In the one example, water, though present, is not available to the plant because the roots cannot function in a frozen soil; in the other example, water is not present, and so cannot be taken up. Therefore the plant must hibernate. In order to husband its resources, it too must reduce transpiration — hence, amongst other devices, the rosette, or compact habit. Thus alpines, arctics, and desert plants go well together in the alpine house, or in the Riviera rock garden; while in England, as I have endeavoured to show, where the rock garden represents the mountains, almost anything may be grown so long as it is not grossly out of scale.

CHAPTER IX

INTRODUCED FOREIGN PLANTS

THERE is scarcely a country in the world which has not contributed something to the gardens of England. I say gardens advisedly. By cultivating plants under glass, it is easier to simulate the conditions under which they grow naturally, since we can raise temperature and humidity to any desired degree; though it is less easy to produce a hot atmosphere, which is at the same time dry.

We speak of plants as hardy, or not hardy. But hardiness is not an absolute quality. It is a degree of adaptation to particular conditions. The beautiful *Cattleyas* and *Brassias* we see in hothouses, *Orchids* costing anything up to ten pounds apiece, are perfectly hardy — in Brazil and Guatemala. If those conditions are largely exceeded, the plant dies. In a variable climate such as that of Great Britain, hardy plants perish in our gardens every year. In some years, when we happen to suffer from a particularly long and cold winter, or a spring drought, or a wet summer, or late severe frost, the mortality amongst our garden plants is enormous. But taking

THE ROMANCE OF GARDENING

the country as a whole over a period of years, we can grow a very large number of foreign plants in Britain. The total British flora is about 2,000 species of flowering plants. There are at least six times that number of foreign plants cultivated in our gardens.¹ Naturally different parts of the world have contributed very unequally. The tropical belt has been most niggardly. The temperate belt, on the other hand, including such regions as Japan and eastern China, northern Asia, and North America, has contributed more than a fifth of the whole. But it is the great mountain ranges of the world, the Alps, the Andes, the Rocky Mountains, and especially the Himalaya and the mountains of western China, which account for the bulk of our introduced plants. Not less than a third of the total, about 4,000 species, may be attributed to these mountain ranges. A fourth source is the Mediterranean region, which provides nearly a quarter of the whole; an area extending beyond the coastlands of the Mediterranean itself. Thus, it is not difficult to discover the countries to which we are chiefly indebted for our aliens. It will, however, be easier to consider a world divided into geographical areas, rather than sovereign states. Plants pay scant heed to political

¹ For the following figures I am indebted to a paper by Sir William Wright Smith, read before the Fiftieth International Botanical Congress, held at Cambridge in 1930. This paper was published in *Notes R.B.G. Edinburgh*.

INTRODUCED FOREIGN PLANTS

frontiers, save where those frontiers coincide with deserts, or mountain ranges, such as the Himalaya. If the population of the world would divide itself into national groups, each group occupying a natural region, and separated from adjacent regions by formidable barriers, such as oceans, deserts, or great ranges of mountains, there might not be perpetual peace between the nations, but there would certainly be fewer wars. Unfortunately much of man's ingenuity has been concentrated on overcoming those very barriers. The pioneer explorer who crosses icecaps and desert infernos, is regarded as a hero, no less than the sailor who crosses the ocean in a cockleshell. He benefits mankind. Perhaps he does; but something for nothing is not nature's way. Sooner or later mankind pays for the benefits received on credit. Plants, however, are more stay-at-home. They cannot migrate so easily, and they take much longer to adapt themselves to new conditions.

Europe may be divided into a northern cool temperate part, and a warmer drier southern part — the Mediterranean region. Between the two are the Alps with their offshoots. The cool moist climate of northern Europe favours forest growth, and had it not been for man's interference, most of it would still be covered with forest. Eastwards, in Russia, the climate becomes drier, with the result

THE ROMANCE OF GARDENING

that forest is replaced by grassland; we reach the steppes.

On the whole the climate of northern Europe is like that of Britain, though more severe; and most of the continental trees recur in what remains of our own forests. Two conifers, the Larch and the Silver Fir, which do not grow naturally in Britain, have been introduced. The Laburnum, likewise introduced, is also a central European tree. Several arctic Willows and Birches, as well as herbaceous plants, are found on the mountains of north Britain. Most of our wild flowers are continental; on the other hand, few central European wild flowers are worth cultivating in our gardens. It may be said therefore that we derived our native flora from central and northern Europe; from the same Scandinavian and Germanic countries as we derived our population in fact. For the origin of our garden flora we must seek elsewhere.

Southern Europe, meaning the hot dry coastlands of the Mediterranean, has enriched us with many garden plants, including aromatic shrubs, such as Lavender and Sweet Bay, flowering shrubs such as Rock Roses (*Cistus*), *Viburnum Tinus*, and the beautiful Mediterranean Heath; several conifers, including *Pinus Pinea*; and the Oriental Plane, not to be confused with the London Plane of unknown origin. A few herbs, such as Hollyhock and Anchusa come

INTRODUCED FOREIGN PLANTS

from there. On the African side of the inland sea, we have *Cytisus Battandieri* from Morocco, and *Dedrus atlantica* from the Atlas range. But the greatest gift which has come to us from that favoured region is the spring tide of flowering bulbs — Crocus, Hyacinth, dwarf Daffodil, Grape Hyacinth, Chionodoxa, dwarf Tulip, Colchicum, and Cyclamen. The Crocuses, spring and autumn, forcing their spearheads aggressively through the fragrant earth are a perpetual miracle. They erupt in the night, unexpectedly, and next morning the ground is glistening with sharp cones of veined porcelain, which expand into delicate cups. Egg-yellow Crocuses are quickly pecked to bits by birds; not so the purple ones. The dwarf Daffodils, such as *Narcissus bulbocodium* are dainty miniatures from the north African shore. Mingled with dwarf scarlet Tulips, they are bewitching. The strident blue of Chionodoxa, Glory of the Snow, in early spring is like a cold stimulant. The Grape Hyacinths are darker and gloomier. *Hyacinthus orientalis*, the parent of our pot grown Hyacinths, is perfectly hardy. Many of these dazzling blue flowers come from the islands of the Aegean, or are stained with the blue hills of Greece. Their classical beauty of outline recalls the faded glory of that land. Many lovely Irises too, notably the Spanish Iris, come from this region, which includes Spain and Portugal, Italy, the Balkan Peninsula

THE ROMANCE OF GARDENING

and Turkey in Asia, as well as the north African coast, northern Arabia, Persia and the north-west Indian frontier. It seems strange that a region so sunny and arid should have yielded us just those brilliant flowers which herald the approach of spring to our shores. Many of them indeed breathe life and hope into the lag end of winter. Huddled together for warmth, the dainty Cyclamen uncoils its watch spring stem, straightens it, and holds the sharp-featured flower erect. Crocuses cluster like splinters of light under the dark Cedar trees. Spring is on the way.

Between northern and southern Europe stretches the alpine mountain system, a more extensive range than the Alps as generally understood. Here has developed an alpine flora with many rock plants which normally grow above the forest line, and are buried under snow for several months in the year.

Just as northern Europe stretches eastwards into Asia, so the dry Mediterranean lands stretch south-eastwards into Asia Minor, Persia, Arabia, and Afghanistan. Not many of our garden plants come from these incinerated hills, however. *Rhododendron ponticum* comes from the Black Sea, together with a few of the more flamboyant Tulips, and Irises; and there are some good garden plants in the Caucasus. Afghanistan gave us the Persian Lilac. But it is not to be expected that these arid lands would yield

INTRODUCED FOREIGN PLANTS

much, although several beautiful shrubs grow there. Very few of them however are hardy in Britain. Recent plant hunting expeditions to Turkey and Persia have not been particularly successful in finding new hardy plants.

The European Alps have contributed generously to our rock gardens. *Gentiana acaulis* and *G. verna*, *Primula viscosa*, *P. marginata* and the alpine rose, *Rhododendron ferrugineum* are a few of the plants we owe to them; also many Saxifrages, Campanulas and Silenes, Edelweiss, and Dog's Tooth Violet, are other well-known alpiners cultivated on our rock gardens. Farther east, the Balkan peninsula has given us at least one invaluable tree, the Horse Chestnut, and a few shrubs like *Medicago arborea*. Also *Cupressus sempervirens*.

Continuing eastwards we come to the beginnings of that mighty chain of mountains, the largest in the world, which separates the tropical peninsulas to the south from Central Asia. From north-west to south-east, for 1600 miles, the Himalaya are forested; scores of trees and shrubs, and of alpine flowers from the higher regions, are commonly grown in Britain; India proper, south of the Himalaya, and Burma, lying mainly within the tropics, have provided a negligible number. But going still further eastwards into China, we reach the climax of floral wealth, at least so far as English gardens

THE ROMANCE OF GARDENING

are concerned. More plants have come to us from China than from any other country in the world. This may be due partly to the fact that the Chinese are themselves gardeners, but largely to the fact that China is a hilly or mountainous country, almost entirely situated in the warm temperate zone. The high mountains of western China are best included in the Himalayan region.

The great mountainous backbone of south-east Asia has given us most of our Rhododendrons, especially those of recent introduction, and a host of diverse species of Barberry, Cotoneaster, Pyrus, Sorbus, Pyracantha, and other berrying shrubs for autumn colour. The Sikkim Rhododendrons introduced eighty years ago by Sir Joseph Hooker have never been surpassed in quality; although since the beginning of the present century the ever rising flood of Chinese and Tibetan species has reached greater dimensions. Sikkim was the first part of the eastern Himalaya to be systematically explored. Besides Rhododendrons, it yielded the incomparable *Magnolia Campbellii*, *Primula sikkimensis*, and *Buddleia Colvilei*.

More than a dozen Himalayan conifers, including such diverse species as *Abies Webbiana*, *Larix Griffithii*, *Pinus excelsa*, *Picea Morinda* and *Cupressus torulosa*, are grown in English parks. Of late years, Himalayan botanical exploration has been directed towards



Gentiana gilvostriata, Cambridge blue flowers, 13,000 feet

INTRODUCED FOREIGN PLANTS

Bhutan and Nepal, and the inner ranges, to supply the insistent demand for rock plants. The blue Himalayan Poppies (*Meconopsis*) are much better known to-day than they were even ten years ago. Many Primulas, besides *P. sikkimensis*, have been introduced; for example, *P. Winteri*. But it is as the home of trees and shrubs, both deciduous and evergreen that the Himalaya proper are chiefly famous; broad-leaved trees like Maple and Birch, as well as conifers. Penetrating yet further into the interior, even Tibet has been found to possess in its south-eastern corner a wealth of good garden plants, closely akin to but differing from those of the Himalayan and Chinese ranges. Most famous of all is *Meconopsis betonicifolia*, the Tibetan blue poppy. Primulas are a good second, with *P. Florindae*, *P. alpicola*, and others. The Tibetan Rhododendrons, numbering two or three dozen species, are so rare in cultivation as hardly to call for notice here; and there are other Tibetan plants found nowhere else. Of the great forested mountain ranges which separate India from China, one need only say that their flora repeats that of the Himalaya, and out-rials it in numbers of species. It is the same story over again, intensified; the same genera doubled and redoubled. A wealth of meadow Primulas, such as *P. helodoxa*, *P. Bulleyana*, *P. Beesiana*, *P. Littoniana*, to mention four of them, come from

THE ROMANCE OF GARDENING

western China. Innumerable Rhododendrons, *Gentiana sino-ornata*, and many rock plants less well known, are likewise Chinese.

The flora of the south China hills, round the sea-coast, from Shanghai to Fuchow, associated with the name of Robert Fortune, was known long before that of the far west. It is indeed a very different flora. This region inhabited for ages by a highly civilized people who themselves cultivated plants, gave us many Roses, Azaleas, China Asters (*Callistephus*), Camellia, Chrysanthemums, *Pyrus japonica*, Peonies, Yulan (*Magnolia conspicua*), and *Cupressus funebris*, all of which had long been grown in Chinese gardens and temple courtyards. Nor must we omit interior China, the unexampled richness of whose flora was revealed by Augustine Henry and E. H. Wilson. To those men, and to China, we owe dozens of remarkable trees and shrubs, including *Davidia involucrata*, *Acer griseum*, *Actinidia chinensis*, and *Magnolia officinalis*. It is impossible to go into an English garden nowadays without seeing plants from China. Fifty years ago, Andine plants were popular amongst gardeners but they were only hardy in the warmer and moister parts of the country, on the western sea-board. To-day Chinese ornamental plants have almost ousted them in favour, and have the great advantage of being hardy over a much larger area of the British Isles. To indicate a tithe even of the

INTRODUCED FOREIGN PLANTS

better known ones, would expand this chapter into a catalogue.

Japanese plants have long been known in Great Britain. The Japanese, like the Chinese, are gardeners; and of late years the Japanese style of gardening has been imitated — rather less than more in England. Botanically, the flora of Japan is included with that of China in the eastern Asiatic region. A peculiarity about the flora of the eastern Asiatic region is that many genera of trees and shrubs found there are also found on the Atlantic seaboard of North America. Usually there are many species in China and Japan, as against a few species in North America. For instance the Magnolias, Wistarias, Catalpas, and Witch Hazels, all commonly grown in our gardens, come from China, Japan and the eastern United States. There are two known species of Tulip tree, one Chinese, and one, commonly cultivated in this country, North American; the Tulip tree is not known in Japan.

But despite a general resemblance between the flora of Japan and that of China, Japan has its own peculiar trees, shrubs, and rock plants. *Sciadopitys verticillata*, the Umbrella Pine, is often seen in gardens, and so is the beautiful spring flowering *Magnolia stellata*. Japanese Maples are as well known as Japanese dwarf trees. Another strange looking tree is *Ginkgo biloba*, the Maidenhair tree. But it is for

THE ROMANCE OF GARDENING

its Cherry trees that Japan is most justly famous. Their variety is great, and many of them are in cultivation; one cannot see a Cherry in flower in this country without thinking of Japan, and the avenues of Cherry trees in Tokyo and elsewhere. Amongst familiar herbaceous plants, *Iris laevigata* (*I. Kampfaeri*) and *Primula japonica* are Japanese. *Aspidistra* may also be mentioned in a whisper.

The last great land mass in the north temperate zone is the North American continent. Canada has provided this country with only a very small number of trees — one, the Douglas Fir, of outstanding beauty; but the popular Musk plant of Victorian days, which so mysteriously lost its scent, came originally from British Columbia. If, however, we continue southwards along the Pacific coast range into Oregon and California, we reach the home of nearly all our finest introduced conifers, of which it will be sufficient to mention three: *Sequoia gigantea*, the ‘big tree’, *Cupressus Lawsoniana*, and *Picea pungens*. Scotland is full of American conifera, and they are equally abundant as specimen trees in English gardens. Out of more than 200 different conifers cultivated in the British Isles, over one-third come from North America, and over one-fifth from east China and Japan. It is therefore odds on any cultivated conifer coming from one of those regions. But conifers are not the only American contribution

INTRODUCED FOREIGN PLANTS

to our gardens. I have already referred to Magnolias — the common *M. grandiflora* is the best known, Witch Hazels, and other Asiatic genera. *Garrya elliptica* is Californian; so also are *Premontia californica* and *Romneya Coulteri*. Several brilliant Azaleas, known as swamp Honeysuckles, are American, as well as *Rhododendron catawbiense*. Distinctive American plants are Mariposa Lily (*Calochortus*), the flowering Currant (*Ribes sanguineum*), *Rubus deliciosus*, Coreopsis, Dodecatheon and Eschscholtzia, Pentstemons, and Phlox. Our Michaelmas Daisies are almost all North American. The desert Cacti, many of which are perfectly hardy, come from the western states, and the familiar annuals called Clarkias, from California. Yuccas also are American. These are but a selection of the twelve hundred North American plants grown in British gardens; and there are doubtless many more which would be grown if we could obtain them. At the present time it appears to be harder to get seeds from western North America than from almost any other part of the world.

CHAPTER X

WHERE OUR PLANTS COME FROM

LEAVING the north temperate zone, and travelling southwards we reach the tropics. The border line between temperate and tropical is, in the northern hemisphere, marked by an irregular belt of desert. Europe, lying wholly north of the 35th parallel, is well outside this belt; but the arid Mediterranean region heralds its approach. Behind the narrow strip of the African littoral, the desert begins in earnest, and stretches southwards in immense desolation. Beyond the Atlas are no more garden plants. In western Asia, the desert zone lies north and south of the 30th parallel: but the long narrowing Indian triangle reaches far beyond its influence; so too does the longer and narrower peninsula of Further India. Owing to the arrangement and concentration of the mountain ranges in south-eastern Asia, the desert belt, east of India, swings up towards the north-east, and lies mainly in Central Asia between the parallels of 30° and 40°. But it may be noted, as an irregularity in the other direction, that the coast strip of Annam, which is entirely within

WHERE OUR PLANTS COME FROM the tropics, is arid. Lastly, the American continent has a desert belt in Mexico, which stretches northwards into the south-western United States to beyond the 35th parallel.

Before dealing with the few contributions to our gardens — as opposed to our houses — from tropical countries, there are some general considerations worth mentioning. As we have already seen, more than half the land surface of the earth is situated in the temperate zone, and only a third in the tropical zone. It would therefore be a fair inference to expect a larger proportion of the world's flora in the temperate zone than in the tropical zone. But in fact it is not so. The simple explanation is that in the tropics as they are to-day, conditions of temperature, sunlight, and moisture reach their optimum for woody vegetation. Thus plant life is here more exuberant and more varied than anywhere else in the world.

Vast areas of the north temperate zone are occupied by comparatively few species. I need only instance the Birch and the Willow scrub of the tundra; the Fir forests of Siberia; the Russian steppes and the American prairies. There are no great areas of the tropics over which such stereotyped floras occur. The Mangrove swamps of tropical estuaries, apparently monotonous, are composed of many species of trees, to say nothing of an extensive

THE ROMANCE OF GARDENING

epiphytic flora. It is only owing to their peculiar appearance that they all look alike. Arid regions in the monsoon belt have a far more varied flora than a cursory glance would lead one to suppose. In the tropics nature is in her most experimental mood. There is not here that alternation of life and death, death and life, that we are accustomed to in temperate regions. Life and death are going on continuously. The tropical belt forms a huge factory, where every conceivable kind of plant is being turned out, rapidly, to a pattern; so rapidly that the pattern is not always faithfully copied. Thus endless variety results.

There are between 175,000 and 200,000 species of flowering plants known in the world to-day. Of these it is estimated that 60,000 species are found in tropical South America alone!¹ It is evident then that the tropical flora far outnumber the temperate flora, and most of it must ever remain outside our gardens.

Certain groups of plants are commonly regarded, vaguely, as 'tropical', probably because they are not seen wild in England, or even on the continent. Amongst these are Bamboos, and more especially Palms. No tropical scene in the theatre or on the screen would be regarded as authentic unless it were literally stiffened with Palm trees. Torquay by

¹ *The World of Life*, by A. R. Wallace.

WHERE OUR PLANTS COME FROM displaying a cliff, half thatched with Palms and Dracaenas (which many douce people mistake for Palms) is able to compete with Le Touquet. Palms are indeed typical of the tropics, though a few overstep their limits into the temperate zone. None are truly hardy in Britain, except in a few very favourable localities. With Bamboos it is different. Though they reach their largest size in the tropics, many Bamboos grow in cold countries such as Japan and northern China. In the eastern Himalaya they may be seen half buried under snow in winter at a height of 10,000 or 12,000 feet. Many hardy species are cultivated in our gardens.

Neither tropical Africa nor tropical Asia has given us any hardy plants worth mentioning. Curiously enough Mexico has. All the Dahlias came from there; also a few species of *Calceolaria* and *Cosmos*, the former not altogether hardy, the latter happily annuals, and easily grown in the open. *Cosmos* is a plant made much of in Indian gardens, whence it has reached Tibet! It is indeed a far cry from Mexico to Tibet!

Many Cacti, some of the Evening Primroses (*Oenothera*), *Agave americana*, the Swamp Cypress (*Taxodium distichum*), and *Abies religiosa* are Mexican plants. Better known are *Abelia floribunda* and *Choisya ternata*. Mexico indeed has a vast flora, embracing over 7,000 species. This is due largely to an unusual

THE ROMANCE OF GARDENING

diversity of climate and physical feature, as well as to the fact that the country stretches from the warm temperate zone far down into the tropics, through more than seventeen degrees of latitude. It is only from the mountains and high plateaux that plants hardy in Britain are derived.

One could scarcely expect the equatorial regions to produce hardy plants for the cold temperate regions. Nevertheless Brazil is the home of at least one well-known garden plant *Abutilon megapotamicum*. It is also the home of the flamboyant Bougainvillea, familiar to everybody in India. Farther west, Peru and Ecuador, thanks again to the cool altitudes of the Andes, have provided a variety of plants, particularly in the genera *Tropaeolum*, *Calceolaria* and *Begonia*. Some of the *Escallonias* also are Peruvian.

These plants however belong rather to the great mountain regions of the world and are only indirectly tropical. They grow in the tropical zone, but not in a tropical climate.

When we come to Africa, this principle is even more strongly emphasized. There is hardly a tropical African plant to be seen in British gardens, unless it comes from one of the great mountains such as Ruwenzori. Giant *Lobelias* are grown in a certain Scottish garden; but African tropical mountain plants are not a commonplace in Britain.

While America and Africa extend uninterrup-

WHERE OUR PLANTS COME FROM tedly from the north temperate zone, through the tropical zone, into the south temperate region, the mainland of Asia nowhere reaches the Equator. Peninsula India, Ceylon, Lower Burma, Malaya, and Indonesia, in spite of their mountains, have given us no hardy plants; the mountains are too low, and the rainfall too heavy to allow of the development, within the tropics, of a flora which has any constitution or resilience. True, many of our most beautiful glasshouse Orchids come from these regions; but with these we have no concern here.

For all its vast flora therefore, which may be estimated at not less than 100,000 species (a flora disproportionately large for the area), the tropical belt has necessarily had little influence on English gardens.

And so we come to the southern hemisphere, in many respects so different from the northern.

It is curious to reflect that plants from the Antipodes and from the southern Andes were familiar in English gardens long before the fashion grew for Himalayan and Chinese plants. Plant hunters went to Chile before they went to China. The names of Lobb and Pearce are as well known in horticulture as are those of Arden and Cooper in beauty culture. Amongst familiar Chilian plants are *Berberis Darwinii*, *Abutilon vitifolium*, *Buddleia globosa*, several southern Beeches (*Nothofagus*) and species of *Fuchsia*

THE ROMANCE OF GARDENING

and *Tropaeolum*. Others have been mentioned elsewhere. It is at first sight a curious fact that the Andes, unlike the Himalaya, have given us no rock plants in the popular sense. There is scarcely a single Andine alpine to be seen in our gardens, with the exception of dwarf shrubs like *Philesia buxifolia*. Comparing the 4000 miles of the Andes with the 1600 or 1800 miles of the Himalaya, we may well feel surprised. But the comparison is hardly fair. The Himalaya lie wholly outside the tropics. Half the length of the Andes is within the tropics; and the alpine flora of tropical mountains is peculiar. Even so, comparing some 2000 miles of the Chilian Andes with the Himalaya, there is no doubt of the much greater richness of the latter, particularly in herbaceous alpine plants. Few regions however can vie with Chile in brilliantly flowering trees and shrubs such as *Tricuspidaria* (*Crinodendron*), *Embothrium coccineum*, *Escallonia macrantha*, and *Desfontainea spinosa*. The lovely hardy *Eucryphias* are also Chilian, and several unique conifers — species of *Fitzroya*, *Libocedrus* and *Popocarpus*, all introduced by the indefatigable Mr. William Lobb about 90 years ago. From Falkland's Islands we have derived at least one charming rock plant — *Oxalis enneaphylla*. In contrast to the southern part of South America, which has provided us mainly with trees, South Africa has provided herbaceous and many

WHERE OUR PLANTS COME FROM
bulbous plants, but no trees. The extreme southern end of Africa (that is to say the Cape region) cut off from tropical Africa by deserts, has a flora all its own, and a rich one. It is said to comprise about 5000 species, most of them indigenous.

Characteristic of the Cape are many beautiful compositae, such as *Zinnia*, *Cineraria*, *Gerbera* and *Gazania*; the 'everlastings' also are South African. *Mesembryanthemums*, such as the ice-plant, are not so common in our gardens as they used to be; but red-hot poker (*Tritoma*), Arum Lily (*Richardia*) and Wand Flower (*Sparaxis*) are familiar to us all. Botanists know the Cape flora also for its immense variety of Heaths — over three hundred species of them; but very few of these are in cultivation. Of bulbous plants there are the *Clivias* and Kaffir Lilies, though not all of these are hardy. No mention of the Cape region would be complete without reference to the *Pelargoniums*, *Ixias*, and *Proteas*, although most of these are glasshouse plants.

Continuing eastwards we pass by Asia, only the large islands of the Malay Archipelago lying in the southern hemisphere. There are high mountains to be found here, especially in New Guinea: but so far they have not yielded any hardy plants, though our houses have been enriched with flamboyant Orchids, Pitcher-plants, Ferns and brightly coloured foliage plants in great variety.

THE ROMANCE OF GARDENING

Australia has given us a few plants, mostly from Botany Bay or Victoria; the Wattles, Ratas (*Metrosideros*) and Grevilleas make up in quality something of what they lack in quantity. *Acacia Baileyana*, the Silver Wattle, and *Metrosideros*, with dazzling scarlet flowers, where hardy, are incomparable. The Blue Gum (*Eucalyptus*) is hardy in the southwest at any rate and makes a stately tree, shimmering blue-green against the heavier boscaje; it is commonly grown in India, where also the so-called Silver Oak (*Grevillea robusta*) is equally at home.

Tasmania, small as it is, has done better for us; but most of our Antipodean plants, and they are not a few, come from New Zealand. Captain Cook, Sir Joseph Banks, and the rest of those gentlemen saw with the utmost astonishment that luxuriant southern vegetation, so long completely hidden from the world, so distant, aloof, and whimsical. To one brought up amidst orthodox vegetation it must have been a flamboyant nightmare. Think of the Kauri Pine, of the contorted Corokia, of Olearias, or Daisy bushes, and shrubby Veronicas in place of our blue Speedwell! *Clianthus puniceus*, well-called the Lobster-claw plant, *Pittosporum tenuifolium*, *Plagianthus Lyallii* and *Phormium tenax*, the New Zealand Flax, are typical plants. Amongst herbaceous stuff from the New Zealand Alps are the lovely *Ranunculus Lyallii* and the prostrate *Fuchsia procumbens*.

WHERE OUR PLANTS COME FROM

These are but a tithe of the cultivated New Zealand plants, and those again only a fraction of the 1500 species on the islands

The proportion of land in the southern hemisphere is only a quarter of that in the northern: and if the two temperate belts only are compared, the proportion is: northern, $6\frac{1}{2}$, southern 1.

It is not surprising therefore that we have more northern than southern plants in our gardens; but the southern plants are not the less interesting.

In the southern hemisphere the seasons are of course reversed, and summer in New Zealand corresponds with winter in England, Christmas falling at midsummer. But this does not mean that plants which flower during the New Zealand summer will flower during the English winter. It is temperature and moisture which control the rhythmic growth of plants; the almanac does nothing. Plants therefore tend to fall into step with the seasons, and adjust themselves to the new dispensation as quickly as possible. But it is this partial reaction to climate, and the plant's efforts to re-establish a suitable rhythm, which gives us our late flowering as well as our early flowering plants. In the equatorial belt where it is 'always afternoon' and there are no well marked seasons, there is no rhythm; plants flower inconsequentially, whenever they feel like it — or rather when they feel strong

THE ROMANCE OF GARDENING

enough to do so. The leaves come and the leaves go — one hardly notices any change throughout the year. Trees are in young leaf, in old leaf, in fruit, and in flower, at the same time; it is very convenient for the botanist! Those who hanker for the tropics might pause to remember the deadly monotony of the magnificent and exuberant vegetation. It palls on the senses far more quickly than does our changeful flora.

CHAPTER XI

UNFAVOURABLE CLIMATIC CONDITIONS

THERE are few places in the world where plants will not grow. Even deserts are rarely so completely desert that they can support no plant life. Plants grow far within the Arctic circle. On the great mountain ranges of the world they may be found up to 19,000 feet altitude. They grow in hot springs, in volcanic craters, and in the sea. However, what we want to do is to grow plants in Britain. Now Britain has a temperate climate; at any rate it is situated in the temperate zone — well in. Consequently, it is reasonable to suppose that most plants which enjoy a temperate climate will enjoy Britain. Let us start with that assumption, though every gardener knows that plants, like human beings and dogs, have constitutions good or bad; nor is our climate uniform — far from it. After all, Britain is a small island lying just off an immense land mass, the Eurasian continent, and facing an immense Atlantic Ocean. Climate depends on the circulation of the earth's atmosphere, which in turn is controlled by the distribution of land and water,

THE ROMANCE OF GARDENING

by the shape of the land and more particularly by its height above sea level. We have all learnt at school that a maritime or coastal climate is softer and less extreme than a continental or interior climate; and the reason lies mainly in the different physical properties of land and water. Water absorbs heat slowly, but parts with it equally slowly. Rock on the other hand is quickly heated, but as quickly cooled. Thus a coastal district is cooler in summer than an inland district; but it is warmer in winter. This is elementary knowledge of fact; yet it is surprising how many people overlook it. But it is in the application of knowledge to the everyday affairs of life, including gardening, that we so often go astray. There is a popular fallacy that many plants will grow by the sea, because it is warmer there, and not inland, because it is colder there. But temperature has comparatively little effect on plants: most plants can stand a wide range of temperature. It is temperature in relation to or in combination with moisture which counts. Water is the detonating charge in plant life; it is water which makes temperature work. In this connection it is the invisible water in the atmosphere rather than visible rain water which is significant. For any given temperature the atmosphere can hold a certain amount of invisible water vapour or gas. There may be present 1% or 100% of the total

UNFAVOURABLE CONDITIONS

water vapour that the atmosphere is capable of taking up: if 100%, the atmosphere is 'saturated'. When it is raining, the atmosphere is saturated. The relative humidity of the atmosphere is the proportion of water vapour present to the amount it could hold *at that particular temperature*. Every temperature, then, has a saturation point beyond which the atmosphere cannot hold any more water. Any excess of moisture immediately becomes visible as mist, cloud, or dew. The same quantity of air can hold more water vapour when hot than when cold. If the atmosphere is saturated and on the point of precipitating visible water, there are two methods by which this dew-point, as it is called, may be avoided: (i) by heating the air, thereby raising the absolute amount of water vapour it can hold, and (ii) by injecting dry air, which at once absorbs some of the water vapour. Conversely there is one method by which the invisible water vapour present in a saturated atmosphere may be immediately precipitated as visible water, and that is by lowering the temperature of the air. If one carries a glass of ice cold water into a warm room, a film of dew forms on the glass. That dew or water comes from the air — it didn't squeeze itself through the glass. The air immediately in contact with the cold glass was suddenly chilled, and threw down its extra burden of water vapour; the glass being handy,

THE ROMANCE OF GARDENING

it threw it on that, where it became visible as fine dew.

There are many exotic plants which normally grow in a saturated atmosphere. Such plants are found mainly in the tropics, and they are not hardy in Britain. Many are also found far outside the tropics, in the warm temperate regions, where the rainfall is even heavier than in most tropical parts. Neither are these extra-tropical plants hardy in Britain. Yet again some are found in the mountains, where it is never hot even in summer, and where the winters are long and severe. The critical factor is not temperature, but moisture. Transplanted to an atmosphere no longer saturated, they cease to grow. They don't even try. They aren't even visible — they are lying fast asleep under a thick blanket of snow. Such plants can hardly be expected to grow in a continental climate — not because it is too cold for them, but because it is too dry for them. The atmosphere is too dry; and watering the soil round them does not improve it. But they will sometimes grow near the sea, not because it is warmer there, but because the atmosphere is moister. It is what is called a relaxing climate — the air is full of water vapour. Why? The reason is this. Round the coast, and particularly along the western seaboard of Britain, the air is often filled with salt spray, whipped from the waves which dash against the cliffs. As a

UNFAVOURABLE CONDITIONS

result, the atmosphere becomes filled with invisible particles of salt. Now salt, or rather sodium chloride, an important constituent of sea water, is hygroscopic: that is, it attracts moisture to itself, and proceeds to dissolve in it, to deliquesce. (Cheap table salt is always moist in damp weather.) As a result, it is able to hold water in the atmosphere. Inland, a wind, especially an east wind, has a drying effect. But round the coast, a wind merely makes the sea rougher, and keeps the air filled with spray, and hence salt. Moreover on the western seaboard, the wind is usually south-west: that is, it has been blowing over the ocean, and cannot therefore be dry.

Again, plants which grow on the fringes of the desert, or in any very arid region, cannot be expected to thrive in a moist atmosphere, such as our own. But the curious thing is that they often do. A desert is a drought stricken area, and not necessarily a region of great heat. On the contrary, it is sometimes a region of great cold. The interior of Tibet is a desert. But a desert may be, and usually is, subject to extremes of temperature, either great heat, as in Danakil, or great cold, as in Tibet, or both, as in Arabia. There is also such a thing as *physiological* drought, so far as plants are concerned. Water is present, but is not generally obtainable by plants, because there is salt in the soil. Only a few highly specialized plants thrive where there is salt in the

THE ROMANCE OF GARDENING

soil. Most plants can no more drink salt water than men can; they are as ill off on a wet salt plain as men are at sea in an open boat.

Water, water everywhere
And not a drop to drink.

The question of hardiness only concerns perennials, which have to survive our winters as well as our summers. Generally speaking, it is not winter cold but winter damp which kills them; not summer heat but summer drought. The majority of warm temperate plants which we cultivate are accustomed to exactly opposite conditions. They are accustomed to cold drought in winter, to warm moisture in summer. The former we can sometimes supply; the latter more often; the two together rarely. Clammy dampness in summer they relish, but not in winter. In their own homes they are often buried under snow for months, and are necessarily kept dry until the snow melts. It is probably not very cold under a three foot blanket of snow; not so cold as it is on top, at any rate. But it is just cold enough to keep the soil frozen, and therefore dry.

Another fatal flaw in the English climate is a sort of hesitancy in the spring; a defect due to over-eagerness. Spring in England like Easter is a movable feast. It may begin in January or February. Stimulated by the genial sunshine, and an unex-

UNFAVOURABLE CONDITIONS

pected warmth, leaves and flowers burst out in a chorus of colour. Alas! for their credulity. Though the English spring may begin in January or February, it never goes on in March. On the contrary, if it has begun so early, it ends in March. Therefore it is better for the plants if it does not try to begin before April, or even May. Without such encouragement, no plant, unless it was especially designed by an all-wise providence to flower with the temperature at zero, will open a bud. And it is worth noting that plants like *Rhododendron mucronulatum*, *Hamamelis mollis*, *Forsythia suspensa*, *Rhododendron leucaspis*, *Viburnum fragrans*, and others, which open their flowers in the depth of winter, do not risk their precious leaves. Even Snowdrops, Winter Aconites and Crocuses hardly show a blade of green. If the flowers are destroyed by a sudden cold snap, no lasting injury is done: but if the young leaves are destroyed, the plant may be crippled for a year — may indeed perish. The real trouble begins when warm weather deceives the plants into believing that spring is here when it isn't. This does not happen in their own land. The snow does not begin to melt till May or June; but once it has begun, it goes on melting. Nor is spring on the instalment system the only shock immigrant plants meet with. There are our late frosts. These come unbidden when spring or even summer is definitely with us. Frosts in June do

THE ROMANCE OF GARDENING

untold damage to young foliage. A plant which will stand ten or fifteen degrees of frost in winter without blenching, may be killed by five degrees of frost in May or June. Just as a man advisedly dressed in summer clothing in June, may catch a fatal chill if it turns suddenly cold in the evening.

Obviously then the most valuable introductions nowadays are those which give us good cheer in the winter months; particularly in January or February.

It is almost impossible to tell beforehand how a foreign plant will react to our climate. Experience teaches a good deal; but it doesn't teach that. One may make a shrewd guess whether or not a plant will be hardy in England, but it is always a guess and generally a wrong guess. Hardy is a comparative term; much depends upon the degree of hardiness. Certainly the most obvious peculiarity of the English climate, a peculiarity which it shares with the rest of the north temperate zone, is its succession of seasons — spring, summer, autumn and winter. We expect to have cold, but not very cold, winters, and hot, but not very hot, summers. Spring and autumn may be anything. It is natural therefore to expect that plants which enjoy cold winters and warm summers, whatever part of the world they live in, will be hardy in Britain. Yet there are so many exceptions that this means very little. For example several of the *Cistus* or Rock Rose family are hardy,

UNFAVOURABLE CONDITIONS

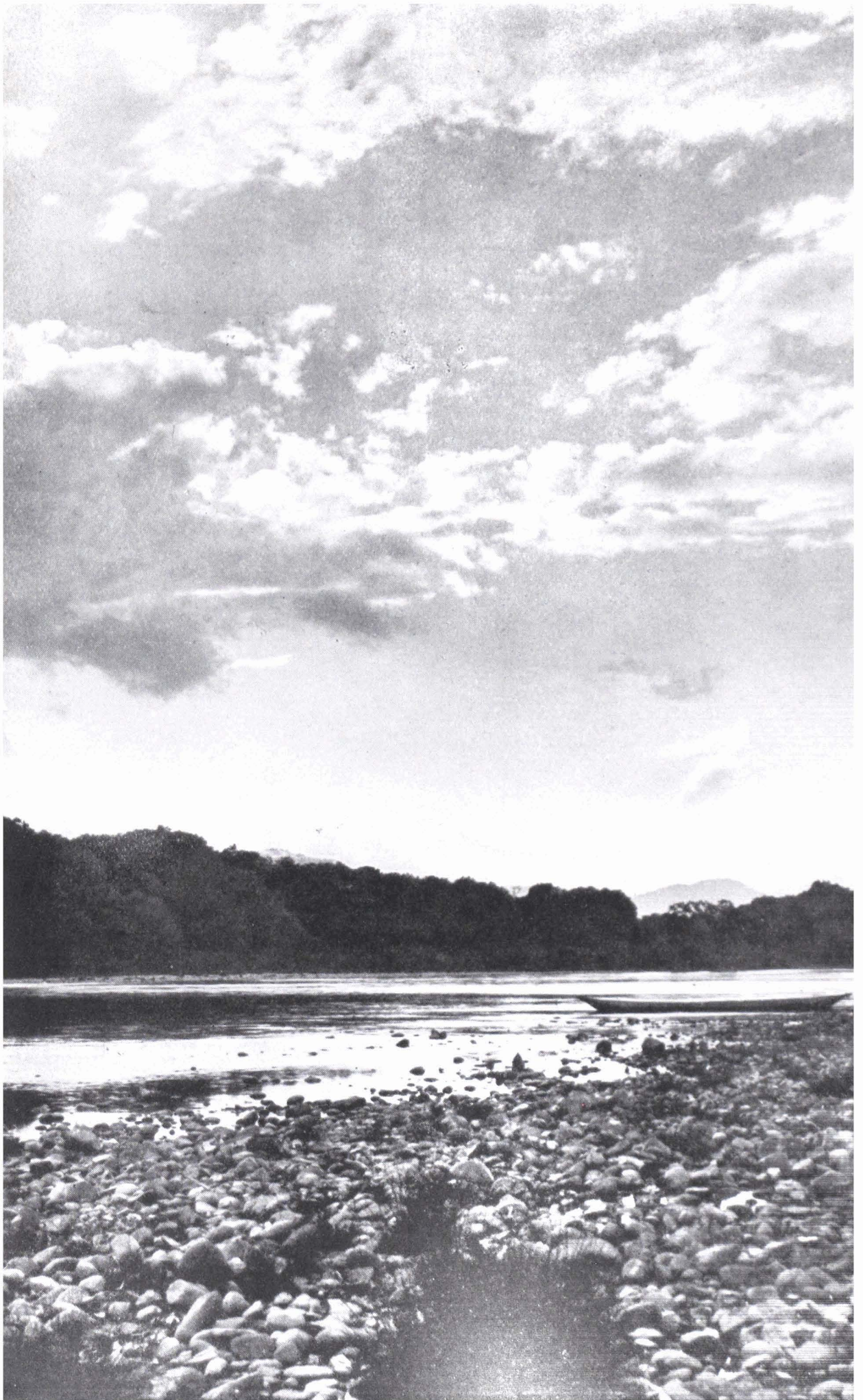
at least in the milder parts of the country; though these plants come from Spain, North Africa, and other dry sunny places bordering the Mediterranean. The Fuchsias, which come mostly from Mexico, Peru, Chile, and other parts of South America, are hardy in the west of England; though nobody would suspect it to look at them.

Tropical plants, unless they hail from a high altitude, are not likely to be hardy so far north as England. But altitude is to some extent equivalent to latitude, at least as regards one factor in plant life: namely temperature. The higher you ascend, the colder it becomes. The further you go from the equator, the colder it becomes — or it ought to become; and the colder it becomes, the lower the snow line descends in the mountains. Thus beyond the Arctic Circle north of latitude 80° , the snow line is at sea level. Near the equator, in New Guinea and in equatorial Africa, it ascends to 13,000 or 14,000 feet. Between these extremes the snowline should descend steadily from the equator to the pole — at least theoretically. Actually it does not: there are other factors which have to be taken into consideration. There is for example the question of moisture. Without precipitation, obviously there can be no snow, and therefore no snow line. Aspect, whether facing the sun or facing away from it north or east, also produces an effect. So also does the

THE ROMANCE OF GARDENING

direction of the prevailing wind. On the equator, where the heat is great, one would expect to have to ascend to an unusual height in order to reach everlasting snow. But precipitation is also great — much snow falls; therefore it takes longer to melt. North of the Himalaya in Tibet on the other hand, although we have reached the warm temperate zone, more than 2000 miles north of the equator, we must ascend to a much greater height. Here very little snow falls, and it has no chance of accumulating. On the south side of the eastern Himalayan range itself the snow line descends to 13,000-14,000 feet: on the north side to 17,000 feet. In the Peruvian Andes, the snow line stands at 16,000 feet on the east side, at 18,500 feet on the west side. By the time we reach the European Alps, it has come down to 9,000 feet. In Scotland it might stand at 6,000 feet, if there were any mountains sufficiently high to be permanently snow-clad. In Lapland it descends to 4,000 feet.

Thus it comes about that numbers of plants from the warm, or the very warm temperate zone, are cultivated out-of-doors in Great Britain. They come from high up in the Andes or the Himalaya. Similarly plants can be successfully imported from more northern latitudes but lower altitudes than those: from the Caucasus and the Swiss Alps, Japan, and New Zealand.



UNFAVOURABLE CONDITIONS

But it is also true that many plants from countries with much less claim to an English climate are cultivated: plants from southern Europe and North Africa for example, from Mexico, Brazil and South Africa. What is the secret? The secret would seem to be that plants are amazingly adaptable, and so long as they are treated with consideration, they will do their best.

During the recent droughts many and bitter have been the complaints of gardeners at the losses they have suffered. *Oxalis enneaphylla*, which had been doing beautifully with me for a year, perished suddenly, without even flying a signal of distress. *Linaria faucifolia* sickened and died slowly. *Erinus alpinus* refused to grow and I got so tired of it I just hit it over the head. These are small examples of rock plant losses which might indeed have occurred at any time. I am convinced however that the *Oxalis* died, not from lack of water at the roots, but from lack of water in the air. It comes from Falkland's Islands which enjoy a climate something like that of the west coast of Scotland.

When we come to trees and shrubs, especially those on light soils, the losses are incalculable. There was mass destruction of *Rhododendrons*; and it is probable that many trees and shrubs will have become rare. The moisture loving *Primulas*, such as *P. helodoxa*, which have been having a fine time

THE ROMANCE OF GARDENING

during the long pluvial period since 1912, have now had a nasty shock, and some of them may go right out of cultivation.

But if many plants have suffered as a result of the drought, an equal number have welcomed it. The sun loving, heat loving shrubs and rock plants have rejoiced. Never has there been such a flowering of uncommon trees. The hot weather of 1933 ripened the wood, and a paeon of blossom burst forth in 1934, even if it was the last blossom some of them will ever display here. Nor need we grumble; with many of them it was also the first. Even native or long established trees, such as Hawthorn and Horse Chestnut, flowered far more generously than usual. Catalpas, Judas tree, *Paulownia imperialis*, and many others, were spectacular. Irises, Tulips, Rock Roses, Lilies, and in fact most bulbous and succulent plants, enjoyed boom conditions. They deserved it after all they have been through. If therefore we have lost some plants as the result of the drought, we have also gained some. If fine dry summers become the rule for a time, we shall see a change in our gardens. Plants which cannot exist without abundant moisture both in the ground and in the air, will gradually disappear, however unremitting the care bestowed on them. Plants which enjoy heat and dry air, and this applies principally to rock plants and herbaceous borderers, will thrive.

UNFAVOURABLE CONDITIONS

They will be sought after, introduced, and propagated. Fortunately — for therein lies much of the elusive charm of gardening — it is not always possible to separate the sheep from the goats. The blue Himalayan Buttercup (*Anemone obtusiloba patula*) ought logically to have perished this summer. Mine at any rate did not. It flourished; and in the autumn I divided it successfully. Yet it comes from high up in the cool misty Himalaya, lives in a bath of perspiration, and rarely sees the sun.

That there are climatic cycles is generally agreed, e.g. in temperate regions the Brückner cycle of thirty-five years, an alternation of wet and dry periods. Looking up the horticultural history of the last hundred years, it is surprising to find how many foreign plants were in cultivation when Queen Victoria came to the throne. Not less surprising is it to discover how many of them are no longer in cultivation. This is partly due to changing fashion, not only in plants, but in styles of gardening: partly to the introduction of better species or varieties: and last, but not least I believe, to the climatic cycle. Within the last fifty years, a surprising number of plants have disappeared — some of course because we have not yet mastered the knack of keeping them alive. A great many have also been introduced for the first time: but it would be pleasant to re-introduce some of the lost ones.

THE ROMANCE OF GARDENING

Another reason for the gradual disappearance of cultivated plants is found in a survey of fashionable areas. A hundred years ago North America was such a fashionable area. Of late years interest in China has dominated the horticultural world, and America has sunk into the background, taking with it many American plants.

It is quite possible that our pluvial period has come to an end and the droughts of 1933 and 1934 may mark the dawn of a new era in which sun bathing plants will enjoy themselves. We may again see *Mesembryanthemums* and *Helianthemums* on the rock garden.

There is still abundant room in our gardens for winter flowering shrubs, evergreens, and berrying shrubs, especially such as bear berries unpalatable to birds. In the south and west of England where everything flowers early, summer flowering shrubs are invaluable. *Rhododendrons* whose leaf buds break late, thus protecting the tender leaves from damage by frost, are also useful. There is a dearth of dwarf shrubs suitable for a small rock garden, and although there is no real shortage of climbing plants, far too little use is made of these beautiful sinuous things in modern gardens. One has only to look at a tropical forest to see what a wonderful effect they make.

CHAPTER XII

PLANT HUNTING DAYS

ALTHOUGH there are not and never have been many professional plant hunters, yet foreign plants have been pouring into this country for a very long time; but never has the current been quite so broad and strong as during the first quarter of the present century.

This is an age of intensive specialization. It is almost impossible nowadays to know something of everything and everything of something. Perhaps the ideal no longer holds good. So plant hunting like every other activity, such as flying an aeroplane, climbing Mont Blanc, or playing football, becomes a profession. There are only two subjects on which I feel competent, or confident, to address my fellow men; one of them is plant hunting.

And yet, paradoxically enough, the plant hunter is anything but a specialist: nowadays more than ever he has become an explorer. The fact is, plant hunting has had such a vogue for the last two hundred years, whether by amateurs or professionals, that all the easily accessible places have been searched for plants, and re-searched; only the remotest and most

THE ROMANCE OF GARDENING

inaccessible interiors remain unexplored. They are the last strongholds; nay, they are worse than that. Of course many of the now comparatively accessible parts of the earth were, less than a hundred years ago, very inaccessible, but the rough has been made smooth, and to-day one may reach with ease many places which not long ago presented formidable obstacles. But the still inaccessible places which remain offer no facile means of approach even in the future, so far as we can foresee. They are the residue, after all the fertile and habitable, or otherwise exploitable parts of the earth have been brought under control. This undeveloped residue is not large; but the interesting point for us is that parts of it are indescribably rich in plants. So the modern plant collector becomes something of an explorer, and that, needless to say, adds to the interest of his work.

But even explorers, with all the modern means of rapid transport at their disposal, cannot explore the whole world. More and more explorers explore less and less territory. It is only the modern politician who can explore every avenue; most explorers, as opposed to those restless collectors of sense-impressions commonly called globe-trotters, confine themselves at any rate to one continent and to one aspect of exploration. After the pioneer comes the trained scientist—the geologist, the botanist, the zoologist—

PLANT HUNTING DAYS

to give us in detail information about one aspect of the new land. And though there are now no new lands left to be discovered, since we have filled in the outlines of the continents, there are still places to which even the pioneer has not yet penetrated. How much less the scientist!

Now the botanical explorer has a twofold object in view in discovering new plants. In the first place he is helping to solve the insoluble riddle of the universe, that shrilly insistent Why? why? At least he is helping to solve part of the riddle — the riddle of the evolution of plants; for you cannot well explain *how* plants became what they are until you know *what* plants there are. To know how they are distributed over the earth and then to know how they came to be distributed just like that, might also be a helpful piece of information. No doubt we know most of the flowering plants of the world — many of them in mummy form, and fragmentary mummies at that in our herbaria. But it is certain that there are literally hundreds of species which remain to be discovered. Plants vary amongst themselves in odd and inexplicable ways.

I am a botanical explorer, or more plainly a plant hunter. For some reason, self-styled big-game hunters of a certain type get quite furious when I claim to be a plant hunter. 'Hunter, forsooth!' they scoff. 'Why, your miserable plants stay put all the

THE ROMANCE OF GARDENING

time! Where then does the hunting come in? Wild animals run away from you, and really do have to be hunted. Plants never do that.'

'True,' I reply blandly, 'wild animals often run away from you, and plants never do that. But sometimes wild animals run after you (though apparently, worse luck, they have never caught up with you) and plants never do that either.' Really, it is much more difficult to see a thing — plant or animal — which remains motionless, than to see something moving. When a plant is in full and striking bloom you may see it readily enough, especially if there is plenty of it. But obviously in the course of a day's march or during a climb, one brushes past many a plant which is not in flower, and it needs a keen eye indeed to pick out a winner amongst that ruck. Yet some of my finest introductions were originally discovered out of flower, and watched over for weeks, until they flowered and fulfilled their early promise (or didn't); or else were never seen in flower at all, until they flowered in England and were welcomed with acclamation. How did I know they were worth collecting? I did not *know*, I guessed. Unkind people say it was just luck. But I had better grounds for my trust than the layman, who is without my experience; and I usually guess right. The truth is, plants nowadays have to be tracked to their uttermost lairs, with a patience and

PLANT HUNTING DAYS

a steadfast ruthlessness of purpose which the layman can hardly believe. The plant hunter must needs be a sleuth. He picks up clues, and draws his own deductions; restlessly he hunts his plants down, and arrests them in the purlieus of high Asia. The simile may be inapt, but it is not inept; for I find in the *Botanical Magazine* a disposition to relate of the earlier plant hunters, that they 'detected' their plants; they were not content to 'find', or rather botanical editors are not content to allow them to 'find' or even to 'discover' a plant in Persia or Peru — they must 'detect' it. Now this is jargon; and jargon is becoming a serious blemish to horticultural as to other specialized writing. Horticulture is a sufficiently important, and a sufficiently extensive subject, to need an idiom of its own; but jargon is not idiom; it is not even technical language — for the same jargon does duty for every subject. But undoubtedly the prevalence of this habit is due to the fact that many people believe that in order to be technical, they must write jargon. The person who writes 'this pretty little subject', because he has called it *Viola bosniaca* once and daren't do again, who writes of 'choice' flowers or of stems 'well furnished' with leaves, is guilty of laziness. He is too obviously using the hall-marked language of 'safety-first', or jargon. Those writers who by constant use have blunted the edge of that useful word 'showy'

THE ROMANCE OF GARDENING

have also done a disservice to horticulture. Perhaps it was never a pretty word; now it is past use. Such mincing speech is hardly tolerable as speech; when written, it is just verbal shoddy. The Press is padded with it.

However, this is by the way; jargon has nothing to do with plant hunting. What queer ideas people hold about a perfectly straightforward, if romantic, job, can only be fully appreciated by one who has been asked questions like the following:

‘What are you?’

‘A plant collector.’

‘Yes, I know, but what do you *do*?’ on a note of exasperation.

‘Collect plants, of course.’ (Collapse of the questioner.)

‘What do you do about the languages?’ someone asks.

But after all, what do you ‘do about the language’ if you want to travel across Europe! Most of us can speak at least a little of at least one language other than our native tongue, even if we are the worst linguists in the world!

‘How do you know where to go, to look for plants?’ is another question. That depends entirely on what kind of plants I propose to seek. I should not go to the Amazon to search for alpiners, nor to Alaska to find hothouse Orchids. That narrows the field. We

PLANT HUNTING DAYS

all know that Orchids grow on trees in the tropics — and we all *ought* to know that they also grow in meadows in Britain; though perhaps we do not all know that Orchids even grow on cliffs 13,000 feet above sea level in the Himalaya. That is specialized knowledge.

If therefore we wish to find plants which cannot face a British winter without artificial heat, we shall turn our attention to the tropics; and if we wish to find plants which can stand any degree of coldness England is likely to offer them, short of a return to the ice-age, then we must go northwards, or else confine our attention to the great mountain ranges of the world, which, being snow-capped throughout the year, are presumably as cold as England ever is. A study of geographical botany, which is as much beyond the scope of the layman as the subtleties of wireless telegraphy and economics are beyond my intelligence, narrows the field further. I know, for instance, that I need not trouble to look in the Himalaya for Calceolarias, Petunias, Oenotheras, Fuchsias, Tropaeolums, and quite a number of other plants, for the simple reason that they do not, and never have grown there. (I don't say they would not). For the same reason we need not bother to seek Primulas, Blue Poppies, or Nomocharis, in the Andes, since we shall never find them. Acting therefore on what is common knowledge among

THE ROMANCE OF GARDENING

botanists, if anyone gives me a commission to discover Rhododendrons, I know at least that I must go eastward and not westward; and that is something. For plants, like animals, are confined to particular areas. Zoologists inform us that kangaroos are confined to Australia — a large area certainly — and pheasants to the old world. Similarly, thanks to the accumulation of knowledge over a long period of time, botanists can say what kinds of plants are to be found in any part of the world; and we should not think of looking for Heaths on the equatorial mountains of Africa, even though we know they are found at the Cape, and on the shores of the Mediterranean.

Finally, I am not infrequently asked: ‘How do you know what plants to collect, and whether they will grow in England?’ To know what plants to collect is, of course, the professional plant hunter’s business, or part of it. To acquire that knowledge he must study his job, like anyone else.

He must have, in the first place, a general knowledge of the flora of the region he proposes to explore (see above): for me this means eastern and south-eastern Asia. This knowledge is acquired like any other knowledge, by study: the study of books on botany and travel, study in the herbarium where dried plants are classified, indexed, and stored, and above all study in the field by actual travel. A plant

PLANT HUNTING DAYS

hunter learns, perhaps more than most men, by his mistakes as he goes along. When he has grasped something of the flora of the region, the next step is to discover what plants are in cultivation; a knowledge to be acquired by visiting gardens and flower shows, and again by study. At the same time he will learn what sort of plants are desirable. Bursting with book lore, our plant hunter can now go forth, with a light heart and a lean purse, on his first expedition; and return at the end of a year, a sadder but wiser man, having collected all the wrong plants. This however, is no great matter, because none of his seeds germinate!

As to whether a new plant will prove hardy or not, that is to say whether it will normally survive out of doors in England, the collector really has no means of knowing. Plants are whimsical. They have very different constitutions. Some can stand anything; others are too faddy to stand anything — they will perish rather than face discomfort. Some will adapt themselves to the most acute change of conditions; others will obstinately refuse to adapt themselves to the slightest change. Indeed plants are astonishingly human. That being so, it is no use for the plant hunter to worry himself much. If a plant strikes him as first class, he had better collect it and hope for the best. He may be able to hazard a shrewd guess as to its chances; but there is no

THE ROMANCE OF GARDENING

doubt he will often be wrong. He has certain general rules to go by, mainly empirical; and they will often fail him. Even his unfavourable guesses will sometimes be wrong, and plants dismissed as tender prove to be hardy.

Britain has perhaps a more varied climate than any other part of the world of equal size. It is the exception, therefore, to introduce a new plant which is hardy over the greater part of the British Isles: on the other hand it must needs be a very exacting alpine which will not prove hardy *somewhere* in the British Isles. The only difficulty is to find where. The more people who try to raise his seeds, the merrier; seeds will germinate for one person, and not for another.

But all such questions as the above are, after all, intelligent questions, asked by kindly persons who do really want to know something about the life and times of so exotic a profession as botanical exploration. It is only occasionally that the blank idiot deigns to put a question — and then it is superb, and passeth all understanding. Someone once said to me:

‘What do you do about water?’ Of course such a question could only come from a bacillus-fanatic who believed that water was inherently and spontaneously germ infected, and could only be freed from this contamination by the Metropolitan Water

PLANT HUNTING DAYS

Board, provided your water rates weren't in arrears. What do I do about water indeed! Are not the mountains under snow for six months of the year! During the other six months, the sluice gates of heaven are opened, and the deluge descends pitilessly. I realize that my interlocutor knows this in a vague sort of way; the only explanation therefore is the one advanced: Drinking water comes out of a tap; there are no taps in Tibet; therefore there is no drinking water in Tibet. Not that I often drink cold water myself, in spite of the surplus; far from it. I am reminded of the warrior in India, who was asked by his inspecting officer what *he* 'did about water'. 'Well, sir, first we filter it; then we boil it; then we chlorinate it, and then — we drink beer.' Substitute tea for beer, and you know what I 'do about water', though I have never yet hesitated to drink from any mountain torrent not too discoloured with mud.

Naturally one receives many quaint letters — it is one of the inevitable penalties of publicity — from people who think they want to accompany you on your next journey (these are not always from attractive young women) or people who want to tell you how an expedition ought to be run. I have a little collection of these curios. If they are genuine, however, I treat them with respect and reply personally — if only because I went on my own first expedition —

THE ROMANCE OF GARDENING

when I was very young, as the result of just such a letter! Mere autograph hunters appeal to one's vanity; applications to become one's secretary (these I have reason to believe sometimes *do* come from attractive young women) have to be reluctantly — sometimes very reluctantly — turned down. Cadgers of photographs or curios, mere smash-and-grab people who write to me simply because they have seen my name in the papers, are not welcomed. But apart from these obvious brigands, I am really very fond of my unknown correspondents — the people who want to go with me, those who welcome me home again, those who grow my plants (I have gained some of my most charming friends from this group) and those who write to say they enjoyed my talk on the wireless, or my latest book. I feel that the Really Great, who do lots of Important Work and keep Secretaries to answer the telephone and the letters of tiresome strangers, must miss a lot of quiet fun as well as some real pleasure. Of course they get more work done; but it is done impersonally. The most fascinating letters I have ever received have been from native worthies who, hearing that I am about to travel through their country, have written to me craving assistance, or perhaps offering me sound advice.

Thus a young scholar whom I once encountered in the Shan States wrote to me as follows, using

PLANT HUNTING DAYS

English pen, ink, and paper. I was travelling through Upper Burma, on my way to French Indo-China and spent two nights at a certain village. The morning I left I received this letter. It is before me now, it is perfectly legible, and indeed the writing is good, as handwriting goes these days:

Camp, Mong Yawng

Dt. April 26th, 1929

Sir

(i) I beg of you to be so good as for the sake of me to be medicine, if you have some spirit namely whisky or brandy.

(2) I humbly hope you to grant me one bottle and I will pay the price of it, tomorrow before you off.

(3) As I am staying in the maralial (malarial?) state. As I wish to prevent of it.

(4) At any rate you can get it at Mon Sing or in French territory.

Thanking you in anticipation

I am, Sir, you most obedient servant

U Long Tip.

The idiom may be odd, but the meaning is perfectly clear; rarely have I been so politely invited to part with a bottle of 'whisky'. I gave the young man half a bottle — his letter was worth it. I also gave him some quinine, and recommended it in

THE ROMANCE OF GARDENING

preference to whisky. However I am grateful to learn that whisky is a sure cure for malaria.

I have also a long and beautifully written (though less beautifully spelt) letter from a young Burman medical student in Rangoon, which I received just as Lord Cranbrook and I were starting out to explore the sources of the Irrawaddy in 1930-31. Appropriately enough, it is written from a certain mental hospital. I refrain from quoting it, because although it caused us no little merriment, it was obviously written with the kindest intention, and it contained an Awful Warning: naturally, coming from a medical student! Accompanying the letter was an admirably executed sketch map of the upper Irrawaddy to illustrate statistics of diseases amongst the tribes, gold and iron deposits, fishing places, and game haunts. The only thing it omitted was a cross, accompanied by the magic words 'treasure here'; otherwise it would have served admirably for a pirate chart. We may smile over these efforts; but how many Englishmen could write an intelligible, let alone a correct, letter in Shan, or Burmese?

To return for a moment to our English questionnaire. Other questions are concerned with the question of transport. 'How do you travel? Are there any roads?' It all depends, my dear lady, on what you call a road. If, as seems likely, your idea of a road is the latest by-pass along which you drive



PLANT HUNTING DAYS

your high-powered car at 70 miles per hour, then indeed there are no roads, even in Tibet. If on the other hand you are prepared to leave the 'road' and follow your nose across Dartmoor; if you have tramped up Scottish glens; if you have scrambled in the Alps, and spent a holiday exploring the less known parts of the Tyrol — you will know that to enjoy mountain scenery, fifteen miles a day is enough for any man, and that motor cars do not go these ways. Elevate the scenery to 12,000 or 15,000 feet, add ranges of lofty mountains, and you begin to picture Tibet; and the transport in company with which you do your fifteen miles a day is mule or pony transport, or more likely yak. In the rain sodden jungle-ridden mountains of farthest Burma and the Assam frontier, however, there are neither ponies nor mules — they cannot live in such a climate; still less can yak; and all transport is human transport. For a man needs hands as well as feet to scale cliffs, to climb amongst rocks as big as churches scattered in the river bed, to crawl fearfully across hideous cliff faces, to ascend and descend ladders which are nothing but tall tree trunks, insecurely leant against the precipice, and with notches for steps: and the brawling rivers themselves are spanned by single rope bridges made of twisted strands of bamboo, or at best by swaying hammock bridges. Travelling over the rolling downs of Tibet

THE ROMANCE OF GARDENING

beneath the turquoise lid of heaven is easy enough, and we prance along at a good speed; but travelling in that welter of steaming chynes which guards the North-East Frontier of the Indian Empire is a slow and laborious business, and six hours hard labour is no excessive allowance in which to make good four or five miles. One must distinguish sharply between the comparatively dry downland and stony plains behind the Himalaya, and the forest paradise amongst the broken hills on the southern side, before the lip of the Tibetan plateau is attained. A third type of mountain country intermediate between these two extremes lies farther east, amongst the alps of interior China; but here, the valleys are so arable that western China is thickly populated as compared with Tibet or the Burma Frontier.

Looking back over twelve years of wandering in Tibet, up and down the far interior of China, along the Indian borderlands, through the alps of Burma and Assam, and across Indo-China, I am struck by the sameness of background throughout some 300,000 square miles of crumpled and twisted earth crust. This compact territory, which is about the size of Great Britain and France combined, has not a single railway or motor road. Stiffened with innumerable peaks far higher than Mont Blanc, traversed by many rivers greater than the Danube, inhabited by a population more diverse than that of

PLANT HUNTING DAYS

all Europe yet not much greater than that of London, it is undoubtedly a naturalist's paradise.

A plant hunting expedition to Asia occupies about a year. This seems rather a long time for the gathering of a few hundred plants, and their seeds, when one considers that, in the course of a summer holiday in Switzerland one may bring home several dozen rock plants for the garden. But Asia is farther away, and it is almost impossible to bring living plants home from the interior of Asia: one must rely on seeds. New seeds take some time to ripen, and unless one knows what the plant is beforehand, it is imperative to see it in flower. If one does know what it is, then it can't be new, and probably isn't worth all this fuss and bother. Probably it is already in cultivation. Six or eight months may elapse between flowering and ripening seed.

As a fair example let us take a journey to the high mountains at the sources of the Irrawaddy river, in far northern Burma. Lord Cranbrook and I made this journey in 1930-31. We left Rangoon in November 1930, reaching railhead at Myitkyina on the third day. Thence we travelled 220 miles to Fort Hertz with mules; after that we walked about 280 miles.

The very great discrepancy between the time required to follow the Irrawaddy for the first thousand miles — three days by train — and the last

THE ROMANCE OF GARDENING

five hundred miles to its source — about fifty days of continuous marching — is easily accounted for by the nature of the country, the climate, and the inadequate methods of transport. Indeed the problem of plant hunting in these days — and I imply of course finding new plants of worth — is largely a question of supply and transport. The sea and railway journey to a possible starting point in Asia need be a matter of no more than three weeks; but the overland journey from railhead may easily require months rather than weeks, and a third of the year has gone, counting the journey out and home. Eight or ten months in the field is usually adequate for one season. As to the sort of harvest one may expect to garner as the result of a journey in Asia, and what is the ultimate result so far as our gardens are concerned, let an example tell.

In 1924, after spending a year in Tibet, I brought home seeds of about 270 different plants. It will be of interest to give a rough analysis of this collection, which is typical of what may be expected from an entirely unexplored region. After the lapse of ten years, the matter stands thus. Of the 270 seed numbers — not species, since several were duplicated — some 220 were raised. To-day about 170 of these, comprising roughly 150 species, are in cultivation; the remainder, being quite unsuited to the British climate, have perished, some of them not

PLANT HUNTING DAYS

before they had flowered and given much pleasure to those who saw them. Of the 150 species remaining, about a third are new — an unusually large proportion. No less than 20 species have received awards from the Royal Horticultural Society, and others, especially some of the new *Rhododendrons*, will certainly do so when they are older.

Now that sounds a good record for one expedition. But let us look a little more closely at the general effect on horticulture, as reflected in English gardens; for that is the final test.

Of all these plants, excellent in their way, probably less than thirty species have permeated even the higher ranks of the horticultural hierarchy — say the thousand gardens which their owners annually throw open to the public on behalf of the Queen's Institute of District Nursing; and only *two* are in any sense of the word popular plants, that is to say, obtainable from almost any nurseryman, grown in thousands of gardens, and regularly exhibited at flower shows and talked about in the Press. Those two are, the Tibetan Blue Poppy, *Meconopsis betonicifolia*, and the Giant Cowslip Primula, *P. Florindae*. Whether they will still be grown forty years on, I cannot say; it is likely enough. But at least it is sobering to reflect how few of all that proud array of brilliant flowers which I discovered in Tibet less than a decade ago have

THE ROMANCE OF GARDENING

proved themselves everybody's plant! It is only fair to add that probably a score of the new Rhododendrons I discovered will henceforth be flowering each year, and will still be giving pleasure to this generation twenty years later.

It must be confessed also, that the two really popular plants — more especially the Blue Poppy — sprang to fame in a night, as it were, owing to their unexpectedness. Anyhow it was very sudden. They came, were seen, and conquered, all in a breath. They were greeted with loud cheers, not only by the pundits of the horticultural world, the aesthetes, and the Society ladies of the Chelsea Show, but joyfully sought after by the man in the street. This, they said, is the goods: something new, something dazzling, something incredible. These two plants have given unalloyed pleasure to tens of thousands, nay to hundreds of thousands. They have achieved the pinnacle of fame, the greatest compliment the popular plant can aspire to — they have been planted in solid masses in the London Parks. Even as I write, there is a phalanx of *Primula Florindae* in full bloom alongside the lake in St. James's Park. It is possible that other plants discovered on that journey, especially some of the Rhododendrons, Barberries and Gentians, *Primula alpicola* and *Lilium Wardii* may yet achieve greatness, *coram populo*.

But looking into the future, it is difficult to believe

PLANT HUNTING DAYS

that fifty years hence, so many as fifty species, survivors of that famous plant hunting expedition to Tibet, undertaken ten years ago, will have settled down permanently in this country and become part of our English country life, as the Lilac and Laburnum are part of our life.

THE FINDING OF 'ORANGE
BILL'

THIS is the story of a Rhododendron which grows in Tibet. I have not told it before. The Rhododendron — a fine form of *R.* has been in cultivation in this country for twelve years. It has flowered more than once, but is not yet full grown. It may require another few years to reach maturity.

From the hilltop one looked down on to the broad valley of the Gyamda river (which showed as lozenge-shaped panes of water where it spread itself out over the sand beds before joining the mighty Tsangpo) and across the dark valley of the Tsangpo itself. The placid waters of the tributary gleamed like quicksilver by day, and at sunset they glowed molten red till the whole chequered junction became one huge stained-glass window. Above the white monastery, stuck like a swallow's nest against the cliff face, rose the mountains, their tops glazed with snow: all around rose the mountains. Beyond the Tsangpo, the white spire of Namcha Barwa stuck up like a steeple above cottage roofs, so far did it overtop the surrounding mountains.



THE FINDING OF 'ORANGE BILL'

Of course, I wanted to go there. I had no ambition to climb Namcha Barwa, but to climb amongst these glaciers and passes, to collect plants on those forbidding cliffs — yes. I pointed out the peak to Dawa Tsering. 'We want to go *there*,' I said. Dawa Tsering looked doubtful; his instinct was to say: 'There is no road.' It might save trouble. On the other hand, it might create trouble. So he looked doubtful. 'I will inquire, sahib,' was all he said. Rather to my surprise, the inquiries elicited a favourable reply; the Doshong La, a low pass, crossed the range just to the north of the snow peak, and the Doshong La was easily reached. Yes, about five days' journey; you see, there were two passes of over 15,000 feet to be crossed first; it was not really quite so close as it looked, because of the high hills and deep valleys between. But it was not far. No, it was impossible to take pack animals over the Doshong La; and anyhow there was too much soft snow in June, we would never get them up to the pass. It was very steep. Men could cross after the middle of June, but it was not easy, nor could they carry loads. The Tibetan herdsmen were willing to go. We would go down to the village over the next range. The herds would come in two days' time — that might mean three days, or four, what did it matter! — as soon as they had rounded up their yak.

THE ROMANCE OF GARDENING

'We shall have to cross the big river, Pönpo.'

'Is there a bridge?'

'There is no bridge at Pe, Pönpo, but there is a boat. But if the river has risen very high we dare not cross at Pe, it is dangerous. We must travel a long day's journey down the river to the rope bridge at Gompo Ne, and come back on the other side.'

It was a wet and misty day in early June when the herdsmen, true to their promise, called for us. The shaggy grunting yak stood in the yard, with their tiny wooden pack saddles on their broad backs, and many feet of raw hide rope twisted round. We breakfasted off Quaker Oats and bacon, with cup after cup of foaming coffee; the loads — bedding, tents and camp furniture, boxes of stores, cooking pots, personal effects and plant paper, were tied on to the pack saddles, so that they sagged low on the animals' backs, and we were off. Through the meads we forged our way, ruffling the yellow seas of Moonlight Primula (*P. alpicola luna*); on past crowded colonies of the Giant Cowslip Primula (*P. Florindae*) which choked the stream bed; through the tangled forest where grew *P. chungensis*, with whorl on close whorl of orange flowers impaled on a tall white wand. So we came to the foot of the pass. Meadow gave place to heathery aromatic drifts of dwarf Rhododendrons, scintillating with cream, old rose, lavender, and wine-purple blossom. The last of the

THE FINDING OF 'ORANGE BILL'

trees were left behind, the scrub tanglement deepened, thousands of alpine flower bells nodded and chimed on the breeze. The view opened out more and more, though except for an occasional glimpse the scudding rain mist hid the more distant peaks. We reached the top of the pass, and camped a short way down the other side, 15,000 feet—nearly three miles—above sea level. On the following day we went down, down, through the scrub, into the forest, out of the forest again into the flower-strewn meadow, and still down, down, into the dry trough of the Tsangpo valley. The path was precipitous and stony, often the bed of a torrent. That night we slept in a big square-built Tibetan house. At dawn we heard the slow chanting of monks, and the deep rumble of the monastery drums. From here our yak returned over the high passes, and we engaged a number of shaggy raw-boned Tibetan ponies, with iron mouths and wild eyes. The Tsangpo is very wide at Pe, like a great lake, and as placid as a millpond. A big wooden flat-bottomed scow was tied up to the bank, and over the gunwale the ponies leapt, driven by the shouts of the Tibetans, and the cracking of their hide whips. They stood huddled and restless in the large boat, sweating with fear. All aboard and off we go! The boat is pushed out, men seize the poles, and we drift slowly from the shore. The current is swifter

THE ROMANCE OF GARDENING

than it looks, however, and presently the bank is sliding by, while the far bank seems a very long way off. We reach mid-river, and the boat, with a list to port, drifts down stream fast.

‘Look after that horse,’ shouts Dawa Tsering, gesticulating wildly; and indeed the pony, scared at the immensity of the river, and jostled to the verge of hysterics by his fellows, threatens to leap overboard and end it all.

‘Oh, sacred Jewel in the Lotus!’ drone the crew, ‘Oh, sacred Jewel in the Lotus!’

The frightened pony is kicking now: all the ponies grow restless and begin to stampede. Their hoofs beat a dull tattoo on the wooden floor and sides; the boat rocks. The men work at the sweeps.

‘Oh, sacred Jewel in the Lotus! Take the pony’s head, Apoh.’ ‘La-so!’ The scow drifts into slacker water, swings slowly round and loses way. Two men leap over the side and wade ashore with the end of a long bamboo rope; we are towed into a bay and made fast. The ponies, jammed into a solid quivering mass, have to take a standing leap over the high gunwale; their disapproval is manifest, and the thwack of the hide whips is mingled with the thud of hoofs against wood. At last all are ashore, men, ponies, and loads; another delay ensues while the frightened and obstinate animals are caught and loaded up again. The crossing of the Tsangpo had

THE FINDING OF 'ORANGE BILL'

taken so long, we were not able to travel far that afternoon. We therefore stayed at a village, a few miles up the river, from which the path to the Doshong La began to climb a stony valley. That night the Tibetans gave us a treat; the village maidens, in fancy dress, danced before us, with a jingling of bells and throbbing of drums. How the men roared! 'Go on! Go on, more, more!' they yelled, frenzied with drink. Only the fat village abbot squatted alone in the dark passage outside the brightly lit kitchen telling his beads. 'Oh, sacred Jewel in the Lotus!' he chanted. 'Oh, sacred Jewel in the Lotus!' His mind was set on higher things.

Next morning we were away early: Dawa Tsering had promised a short march. 'Before the shadows are lengthening we shall arrive,' he said.

'Where?' I asked suspiciously.

'There is a flat place, Pönpo.'

Well, we would see: it might be a suitable place; but unless it was fairly near the pass, it was no use. I wanted to be high up now, in the alps where the alpine flowers, and particularly the carpet Rhododendrons, incarnadined the melting snow.

It *was* a short march! Nor did we climb much. In two hours we halted in a very wet meadow, rainbow hued with flowers. The men began to unsaddle the ponies. I demurred. 'Go on, go on. We cannot stop here, we are much too low down.'

THE ROMANCE OF GARDENING

‘There is no camping ground higher up, Pönpo: the ponies cannot go any farther.’

‘Then the men must carry the loads up, we cannot camp so low down.’ After some argument a party of us went to see if we could find a better place higher up; and eventually we found a boggy piece of ground, large enough to take the tents. It was not a good camping site, certainly, but it was nearly a thousand feet higher up, and a glance at the flaming Rhododendron bushes decided me. We sent back for the loads, and they were brought up one by one, on men’s shoulders. Then we pitched the sodden tents, and having lit a fire made some tea. There was ample time before dusk to climb the steep rock stairway which led towards the upper valley and the pass; and with my rucksack on my back I started off. A thin mist, gelid with half-frozen moisture, was driving gustily over the ridge, and every now and then a shower of rain swooped down, blotting out the mountains and chilling me to the bone. Between the showers, the pale winding-sheet of the mountain gleamed bleakly.

But if the weather was discomfiting, the scene which revealed itself to me as soon as I had ascended the first flight of rocks, compensated for every inconvenience. I was breathless, not merely with the ascent: the valley was alight with flowers! Rhododendrons, dwarf in stature, yet hoary with age,

THE FINDING OF 'ORANGE BILL'

sprawled and writhed in every direction. I trod them underfoot, priceless blooms which many men have yearned to see. You could not walk without crushing them, the whole rock floor was hotly carpeted, and over the cliffs poured an incandescent stream of living lava. When I say that I looked down on twenty-five distinct species of *Rhododendron*, more than half of which had never before been noticed by man — nor have been since, for that matter — I speak the cold truth. It was immense. Aladdin's cave contained nothing to equal this glut of treasure. Could one but reproduce a pale imitation of that scene in England, scarcely would men believe their eyes. Though almost sick with excitement I proceeded methodically. I collected on the spot each species, gave it a serial number, wrote a description of it, and then pressed and dried my specimens. Then in October, I collected ripe seed of every one: aromatic *anthopogons*, wide-flowered *saluenenses*, scalding scarlet *neriiflorums*, apple-blossom *glaucums*, the whole tide-rip of them. Finally I brought the seeds home and they were sown in a hundred English gardens. They germinated well and the young plants were tended and watched with infinite care. They are twelve years old now. In a few years, it may be that some reflection of that gorgeous spectacle will reappear in an English garden; but whether it does or not, many a

THE ROMANCE OF GARDENING

plant from that valley has already flowered, looking none the worse for all its priggish neatness. It was a few days later that, the rain abating somewhat, we essayed to cross the pass, and see what lay beyond. This was a bigger undertaking. The snow still lay deep along the crest of the range and choked the valley leading to the pass itself; and it was soft, melting snow. How deep it lay on the other side we could only guess: for though we had already made a trial trip to the top of the pass, reached in three hours from our camp, 3000 feet below, so thick was the weather that from the top we had peered unseeing into a cauldron of mist, which a buffeting wind beat shrewdly in our faces. However, on the previous day several tribesmen had come over from the other side; and we reckoned what they could do, we could do.

On June 29th, therefore, we started on our quest, which was none other than to cross the Great Himalayan range itself; no mean feat, for the Himalaya have divided Mongolian from Aryan since the beginning. We left camp early, and climbed up to the pass, ignoring for once the flowers around us. Though we had to trudge through a good deal of clinging snow, we reached the top in two hours. On our side of the barrier, the weather had been moderately kind so far; but looking over the brink, we saw an ominous bank of mist heaving

THE FINDING OF 'ORANGE BILL'

below us; and we knew that presently it would come sailing up on the crest of the wind. The descent was terrific. First a long snow slope, leading to a more level part of the valley. Here the snow was many feet thick, and the stream had tunnelled a passage beneath it; in places the roof had caved in, forming dangerous holes. Then we reached the lip of a cliff, over which the stream tumbled, and down its precipitous channel, amongst a tumult of coloured shrubs, we scrambled to the next level. There was snow everywhere, snow and tumbling water. Far below, the valley, hemmed between gaunt granite cliffs, broadened out a little, and vast avalanches of snow, forty or fifty feet deep, blocked the way; beyond lay the outposts of the forest, stunted Fir trees straggling out beyond the main body. And half way down towards the fringes of the forest, in the dense scrub which seethed over the steep rocks, I caught a glimpse of orange, vivid amongst the crimson glory of the Rhododendrons; a billow of foliage shone blue-green. It was raining steadily now, and the task of forcing a way through the shoulder-high scrub was no light one. However, there was the bush, not 200 yards up the slope, and I butted into the thicket, forcing my way through. It was a stiff fight, but at last, out of breath and out of temper, torn, soaked to the skin, and cold, I reached my goal. It was that dreamed of, but scarcely hoped

THE ROMANCE OF GARDENING

for, treasure, a real orange-flowered Rhododendron! And in that moment of triumph I was almost delirious with pride and joy. 'Orange Bill — the Prince of Orange Rhododendrons' I cried aloud; for I felt lyrical. There was only one bush that I could see, and it bore few flowers. I hardly dared cut more than one spray for the herbarium; I should need it all for seed. But there must be more plants amongst all that wilderness. Never mind, I couldn't stop now. I would find them later; we must go on down the valley to the threshold of the forest while daylight lasted; for there were undiscovered treasures there. Incredible flowers jewelled the sodden lawns, and crowded the rills. So back through the scrub I went, to the ghost of a path, and down, down the valley, to a boggy meadow. We stood on the last snow mound, in a wide amphitheatre, surrounded by lofty cliffs over which slid and clattered a hundred cascades, some of them falling from a great height. Biting rain swept over us, the cloud rolled like smoke up the valley; every now and then the roar of an avalanche rent the air. Through the dim atmosphere, thousands of flowers smouldered. After a quick lunch, we turned our backs on the dark forest, and faced the white pass. It was a grim struggle up the cliff, and over the snow, for nearly 3000 feet; but late in the afternoon we stood once more on the Doshong La, and looked down into

THE FINDING OF 'ORANGE BILL'

our camp, towards the hot dry valley of the Tsangpo. Behind us lay mist and rain; before us the long smooth snow slope lay in strident sunshine with the blue dome of heaven above.

Joyfully we raced down the rocks, to the meadow where our camp was; and having almost dried our clothes during the descent, we had tea on arrival. We had been climbing for nine hours, and I was tired but jubilant, so successful had the trip been. In October I would return, and collect seed of all the marvellous flowers I had seen that day, but especially of Orange Bill: in order to make sure of securing that I would cross the pass and camp on the other side. Little did I reckon on the obstacles which had to be overcome before Orange Bill reached England. So far I had only discovered the plant — and one plant at that. I must guess when the seed would be ripe, make the difficult journey to the Doshong La, cross the pass, find the plant again, collect seed of it, bring it safely back, and dispatch it to England, before my discovery could, literally, bear fruit.

That night I wrote in my plant catalogue: 'K.W. 5874. *Rhododendron* sp. Section "Roylei". Doshong La, 12,000 feet. 29.vi.'24. Flowers orange. A bush 6 feet high growing on steep rocky slopes, amongst dense scrub. Leaf buds not yet broken. Foliage bright glaucous, visible from afar. A most striking

THE ROMANCE OF GARDENING

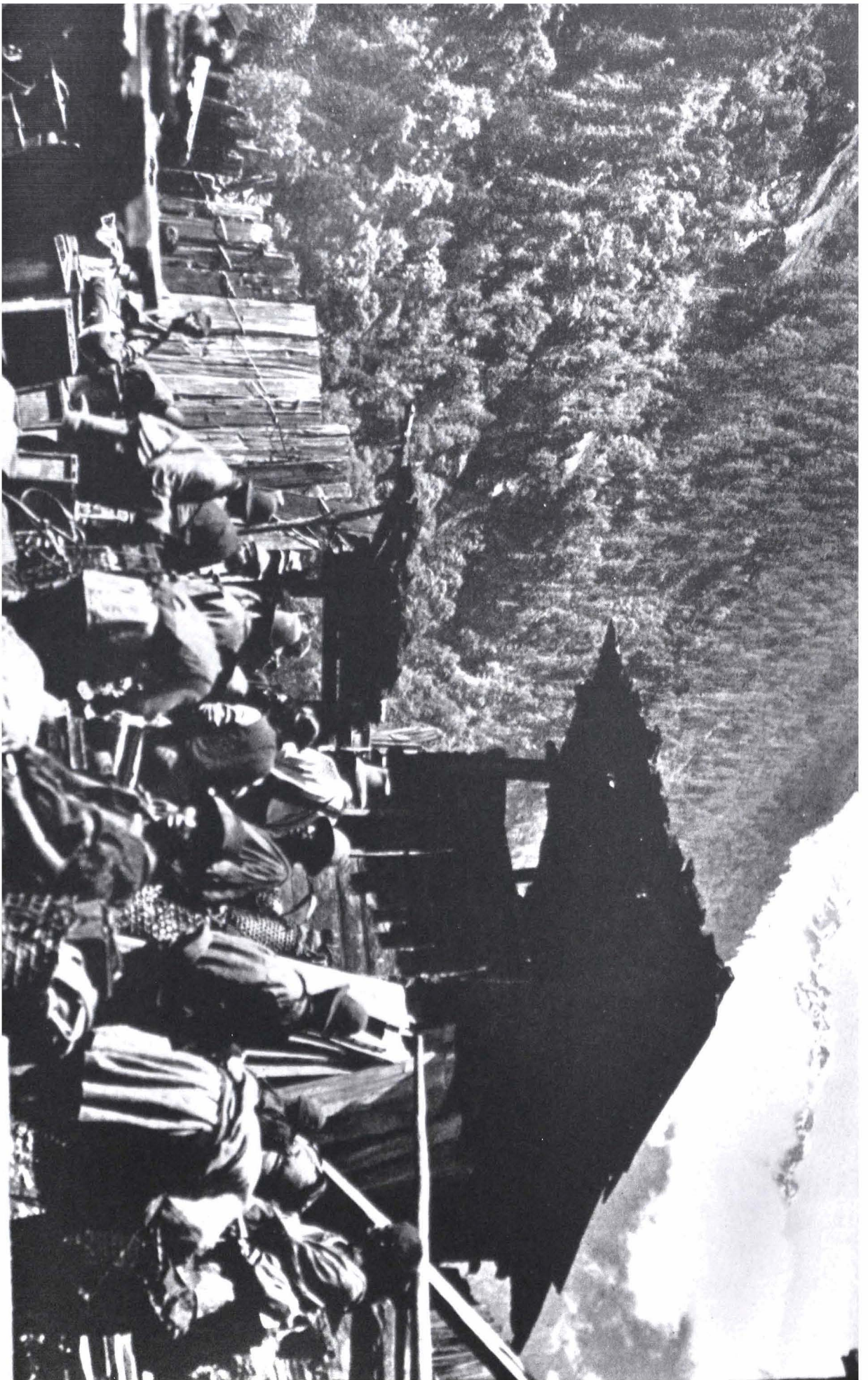
plant', and in my diary: 'The bag was seven new Rhododendrons, three Primulas, and four other plants.' I might perhaps mention that amongst the 'four other plants' was *Lonicera cyanocarpa*, var. *porphyrantha*, a shrub Honeysuckle with wonderful wine-purple flowers, followed by large blue-black or plum-coloured berries.

A few days after this adventure we broke camp and returned to the Tsangpo; and subsequently to our base camp at the village of Lunang.

Nearly four months of strenuous travel passed before we saw the Doshong La again. Early in October we were back at the village preparing for the last round. There were hundreds of seeds to be collected; but none were of greater importance, since none were of greater beauty, than Orange Bill.

On October 15th we returned to our alpine camp below the Doshong La, in the Primula meadow. I resolved, however, that this was too far from the top, so two days later we ascended another thousand feet, and pitched our tents in a swamp. The weather was bad. Squalls of rain came winging over the pass and at night the rain turned to snow.

The Tibetans shook their heads, and looked glum, but they said nothing. For the next three days a gale roared over the ridges, whirling the snow along, and piling it up in deep drifts. All the dwarf Rhododendrons were buried, and I had to dig them out



THE FINDING OF 'ORANGE BILL'

with numb fingers to secure priceless seed. Then, the storm abating, on October 21st we started for the pass. I had cajoled and bribed half a dozen Tibetans to carry light loads over — tents, bedding, and food, the mere essentials, because it was now or never. I must stay over the other side until I had collected seed of Orange Bill, or perish in the effort. The day had promised to be fair, but by the time we reached the pass, the air was filled with flying snow, and we got into fresh snow during the descent. Towards dusk we reached the great amphitheatre: it was almost a lake now, for the snow bed was half melted, and we camped on the driest spot we could find; it was dark before we got a meal, and I was famished after nine hours without food, first climbing and then seed collecting on the way down. I prayed for a fine day on the morrow; but when I turned in, shortly before midnight, it was pouring with rain, and a dense clammy mist filled the valley; of course that meant snow up towards the pass.

October 22nd dawned sulkily. It was still raining; just above our camp a violent snowstorm was raging. I longed for warmth and sunshine just then, but we were six weeks' march from India; 'I must get Orange Bill to-day', I said to myself, little knowing what was in store.

After breakfast I started up the valley, and was soon in the snow; on the way I collected seed of

THE ROMANCE OF GARDENING

several Primulas and dwarf Rhododendrons. This heartened me. At the top of the cliff I halted, and looked about me. It was difficult to recognize anything on account of the mist and the snow: but presently I picked out the gleaming bush of Orange Bill, away up the slope. The young foliage, now fully expanded, shone more brightly than in June, a wonderful blue-green like verdigris, it stood out violently against the white background. And now to reach it. A crust of snow clung to the tangled tops of the bushes, and many of the leaves twisted by the cold into tight spills, hung stiffly down. To say that I progressed two yards in five minutes up that accursed slope would convey no inkling of the struggle. It was a fight all the way, through the frozen tangle. To go straight up was impossible. I dodged which way I could. After pushing in vain against an unyielding barrier, I would seek a passage to right or left, at the same time trying to keep my eye on the prize. Yet so steep was the face, that I as often lost sight of the goal, struggling up to my neck in the thicket. Heaving against the stiff upsweeping branches which fended me off breast high, I finally overbalanced and fell back against the more yielding bushes behind; which gave way, so that I broke through the tangle and collapsed amongst snow and vegetation, half supported, in a helpless position. All the while my hands were being lacerated by the

THE FINDING OF 'ORANGE BILL'

steely branches. After about an hour of this sort of thing, suddenly the bush loomed up beside me like a great puff of blue-green smoke, and reaching out, I grabbed half a dozen capsules. Then I searched the bush, but it had flowered poorly, and I got little more from it; but floundering about on the cliff, I presently found several smaller bushes — the verdigris-coloured foliage was unmistakable, though I had not seen these bushes in bloom — and in all I secured perhaps a score of the fat little capsules, each with its hundreds of seeds. They looked ripe enough, but they were still green and showed no crack; they had not lost a seed; they could not open until the sunshine and the night frosts began to split the valves asunder. Then back to camp, cold and hot, perspiring inside my warm jumper, but with wads of snow down my back, breathless, vexed, but triumphant.

Such is the story of Orange Bill, the most startling of the fifty-odd *Rhododendrons* I have discovered and introduced into cultivation. I have had more difficult tasks, but that is the story of a typical plant hunt, which ended well.

Four months later we reached India, and I immediately posted my seeds to England, where they arrived in March 1925, and were sown without delay. From that moment other hands took up the work, and it is to the gardeners of England that we

THE ROMANCE OF GARDENING

owe a debt of gratitude, inasmuch as for ten years they have watched over the growing plants. In 1932 the first one flowered; but it will be several years yet before the full beauty of this species is realized. Though not altogether new, Orange Bill is a particularly fine orange-flowered form of the well-known *R. Roylei*, a species long grown in our gardens.

Under the snow steeple of Namcha Barwa, overlooking the hundred-mile gorge of the Tsangpo, a dozen bushes of Orange Bill flower unseen in the drenched scrub each succeeding June. Now it sheds its bluish radiance and dangles its metal yellow bells in many an English garden. It has been salvaged from Asia that people in Europe may see it and rejoice. But I suppose the Wild Flower Preservation Society won't like it.

CHAPTER XIV

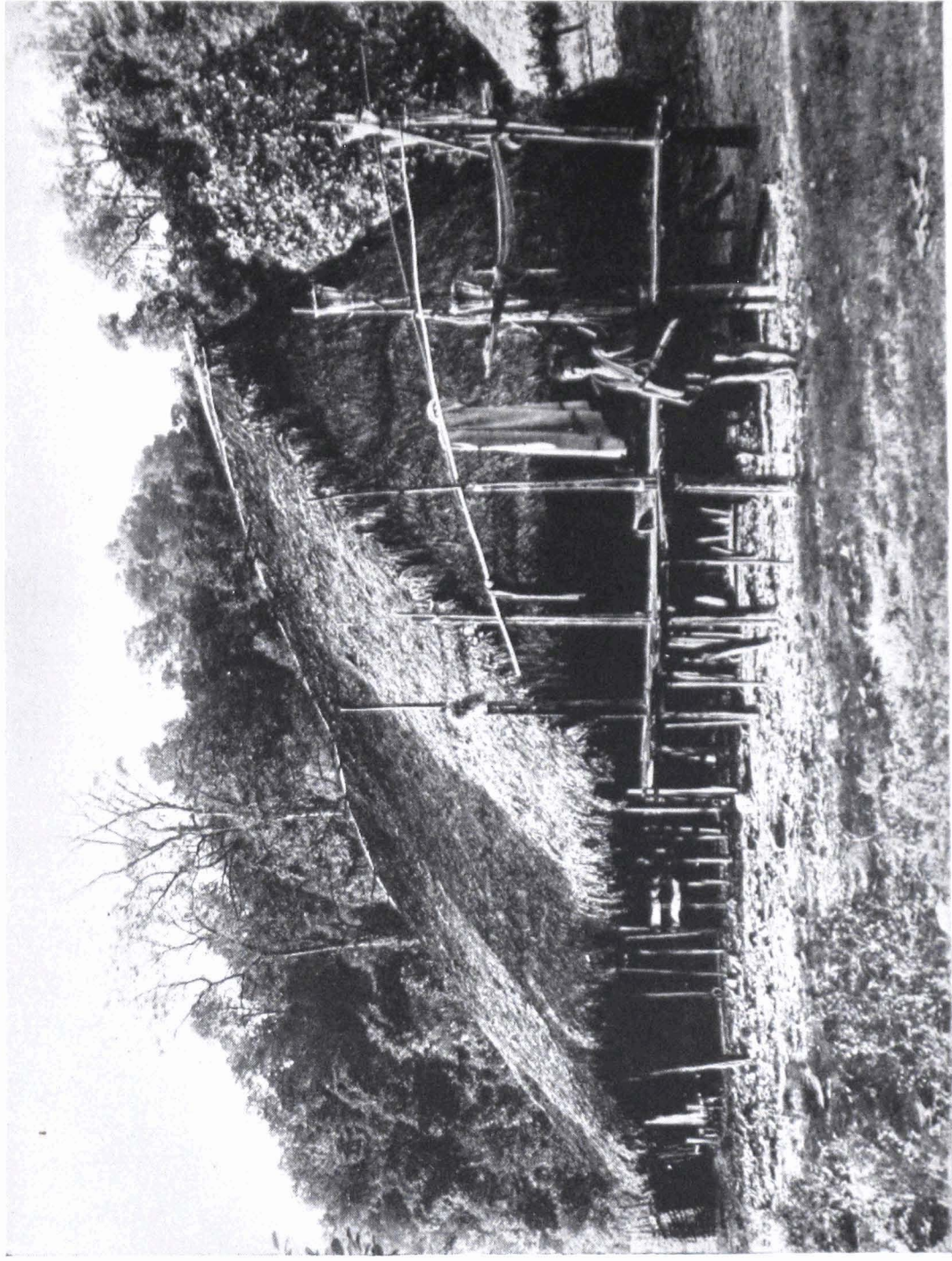
ON THE TOP OF THE WORLD

THE plant hunter is, or ought to be, the world's jack-of-all-trades; otherwise he will never be master of one — namely plant hunting. First of all he has got to know what plants are already in cultivation. As there are some 12,000 of these at least (hardy ones only) the task looks a formidable one. Luckily they do not all come from the same part of the world. If we put the number at 12,000, we may be pretty sure that not more than a third of them come from Asia; it was a wise provision of nature which decided that the various continents should each be supplied with a different selection of flowers. The next thing the plant hunter has to decide is where to go to collect plants. Shall he follow in the footsteps of his famous predecessor, and penetrating perhaps beyond their farthest, in lands now familiar, try to find something they did not find? Or shall he rather try to reach a land which no white man has ever seen before, and trust that its flora will prove unique? Certainly there is an irresistible thrill in this last proposition. But of course the number of quite unexplored lands is dwindling rapidly. There

THE ROMANCE OF GARDENING

are few left to-day, and the largest of them are without any vegetation whatsoever.

Having decided where to go and what to look for, the plant hunter lays his plans. He must time himself to reach the mountains when the snow is melting, and the spring flowers are coming out; he must then find his flowers, collect seed of them in due course, and return to England. Organization apart — and a year's residence in the back of beyond, to say nothing of getting there, and getting out again, requires organization — the crux of the whole business is the finding of new plants, and the harvesting of their seeds. Let me therefore give a brief description of a typical day's work when plant collecting in the mountains of Asia, where the seasons correspond more or less to our English seasons. Camp is pitched in an alpine valley, under a grove of Silver Firs, beside a brawling torrent. It is difficult to realize that this torrent which one crosses by means of a fallen tree trunk, or even by wading, is really the source of one of the great rivers of Asia. Yet so it is. There is a meadow just above camp; it is half under snow now, but already parts of it are jewelled with flowers. On either side of the torrent the cliffs rise in a flight of gigantic but irregular steps. Here and there, through a gash in the face, the mountain has tipped out a load of rubble, which forms a cone, or scree, leaning steeply against the cliff. Higher up



Abor huts of bamboo matting, palm leaved thatch, raised on piles.
Abor Hills, Assam Frontier

ON THE TOP OF THE WORLD

the valley, the snow lies in thick wads, though it is melting fast as the warm air rises from the jungle 10,000 feet below us.

The season is mid-June and the monsoon has broken with a clatter of thunder and a roar of rain. Everything is wet, sodden. The earth sweats water. A thick mist comes rolling up the long valley, and beats against the iron cliffs; it is flung back and broken into cold stinging showers. Nevertheless there are a hundred peaks, passes, and gullies to explore; so after an early breakfast, we dress by the fire and dive into the summer rains. Pushing our way through the dense scrub, climbing over the rocks, wading through bogs, we tramp up the valley towards the ultimate source of the river, and the pass. Soon we are clear of the stunted Fir trees; the cliffs rise grimly on either hand, their heads bathed in cloud; the swollen torrent grinds and crashes down the granite stairway; and great buds of snow patch the screes. Violent as is the scene in its awakening, a note of vivid colour is added by the myriads of flowers which greet us on every hand. The Rhododendrons alone, splashed about the landscape, are making a gorgeous display. There is *Rhododendron selense* for instance. The prevailing colour is rose-pink; the buds are carmine. Some of the trees, however, have ivory-white flowers, flushed salmon-pink, or stained mahogany. Then in a

THE ROMANCE OF GARDENING

marsh we come across Heather-like masses of a dwarf Rhododendron with rigid leaves lacquered over with glistening scales, and lemon-yellow flowers in tight rosettes. It is *R. chryseum* — the gilded one. *R. chryseum*, however, has cast amorous glances at a variety with plum-purple flowers. These two have been joined together in holy matrimony, and their progeny is scattered over the marsh, in pastel shades of salmon, apricot and crushed strawberry. Here and there yellow has jilted purple, and the illegitimate offspring are pasty, not pastel. Now we leave the marsh, simmering under a haze of colour, and start to climb one of the great cone-shaped scree, which narrows a thousand feet aloft into a chimney. This chimney connects the scree with the hanging valley above. For all this country was once under ice; glaciers carved out these valleys in the rough, and water loaded with sharp grit completed the work of erosion. At the base of the scree the largest boulders are piled in confusion, and over them grows a thick mantle of shrubs and bushes. Here is Cotoneaster, its jet-black knotted stems throwing out tufts of silvery leaves, still mixed with last year's pillar-box-red berries, which the birds will not eat. In July maroon-red flowers smoulder here and there, leaves, fruits and flowers all together. *Spiraea japonica* is another shrub of these alpine thickets. It is more loosely knit and graceful

ON THE TOP OF THE WORLD

than the wizened Cotoneaster, its thin aristocratic limbs puffed out with a starry foam of cream-white blossom. It grows also in the dim forest, where the gleaming comet tails of *Clematis Spooneri* twist themselves round it; and the bent black sprays, effervescing from tip to tip, stand out boldly against the sombre background of Fir trees. The banana-yellow butterfly flowers of *Rhododendron trichocladum* twinkle fitfully in the rare flashes of sunshine; and tall tufts of violet-flowered Aster fill every cranny. Pushing through the ruck, scrambling over the boulders, we find ourselves in a steep gulley, where water from the melting snow above has sponged out a long strip of vegetation. Here it is easier to climb, as we can see where we are putting our feet. Above the wide curved cone of boulders at the base of the scree, a coarse gravel extends for some distance, and the scree is closely dotted with small shrubs. A beautiful *Vaccinium* claims our attention. The leathery leaves of shining sea-green, are shot here and there with red or yellow; and amongst them droop short spikes of pale shell-pink flowers, followed in autumn by clusters of plum-blue berries. Here grows a stubble of dwarfened Juniper, or stunted Barberry. Still higher up, the plants change their shape again, adapting themselves to a still finer gravelly soil and to still more exposure to the pitiless wind. Now the stems are reduced to fine threads,

THE ROMANCE OF GARDENING

which weave close mats over the surface of the scree: *Gaultheria*, *Rhododendron calciphila*, *Pyrus* and *Vaccinium*. Nor is this all. There are many dwarf erect herbaceous plants too; especially the curious Lily-like genus *Nomocharis*, represented here by *Nomocharis nana*, a variable species. Sometimes the flowers are of a smudgy liver colour, and sometimes more of a biscuit-yellow, finely speckled with purple; but here they are dawn-pink, flushed and streaked with purple. The solitary nodding flower is borne on a short stem thinly clothed with grassy leaves. Yet, curiously, it is always the Heath families — Ericaceae and Vacciniaceae — which outshine the others. A certain dwarf *Vaccinium* is one of the most exquisite of all alpine plants. The leafy stems rise an inch or two from the dribbling turf slopes, to eddy in purple foliage waves round the rocks. Flattened globe flowers, like miniature Chinese lanterns, hung on wires, glow redly amongst the purple leaves; and in the autumn produce large velvet-violet berries. Close drifts of this delicate plant spread a film of foliage over the slope, and at each season it takes on a fresh hue; but never is it more delicately beautiful than in the spring, when the Chinese lanterns are lit, and dance impishly, or roll like glass bubbles over the carpet of purple leaves.

Even smaller, finer and frailer is the moonstone *Gaultheria*. The stems indeed are like gossamer,

ON THE TOP OF THE WORLD

and give birth to a forest of erect moss-leafy sprigs, each bearing one or two coral-red flowers. The sharply pointed leaves are glabrous and shining, the flowers negligible. It is not till the autumn that the hidden beauty of this weaver plant is displayed. Then the frost-white berries develop, thousands of them, till the whole slope is gleaming with hail stones. Not until the dull flowers had been followed by berries, as large as pearls, had one an inkling of what a carpet of *Gaultheria* had woven itself over the barren gravel. Sometimes the berries are stained a deep rose, or faintly pink. Where there is shelter will be found a prostrate *Rowan*, the pink flowers borne in erect corymbose heads above the highly polished leaves, which turn red as wine in the autumn; but the clustered berries, gleaming like pearl-white teeth against the black stems, grin over the dying foliage.

So we scramble on up the scree, our feet sliding and sinking in as the gravel gets finer, until it is just sand. At last we reach the bare cliffs, from the crevices of which peep a few bold rock plants. Surveying the scene, it looks desolate enough. Mounds of angular rocks, which have not yet worked their way through the mill, lie at the base of the cliffs. Yet there are scattered plants here, too, and sometimes a sandy oasis, sparkling with precious flowers. Golden buttons of *Ranunculus* stud vast interstellar

THE ROMANCE OF GARDENING

spaces between violet constellations of *Primula bella*; orange-spotted Saxifrages fleck the scree, and fill like metal lodes the joints in the granite face. In a hollow, where a stream gushes from the base of a steep scree, grows a cluster of sky-blue golden stamened Poppies, with prickly leaves. The nodding flowers are borne on thin stalks each in the axil of a leaf, forming a spire of green and blue and gold. Close by a giant thistle is bursting its way through a muff of cotton wool. At the moment all one sees is a snow-white dome a foot high, with heads of dusky purple flowers peeping out of the breaking cloud. Later as the plant stretches and expands, the clouds are torn asunder leaving cobwebs trailing from every part of the massive inflorescence; these cobwebs are now seen to spring mainly from the involucral bracts and upper stem leaves. This, if not a true Thistle (*Carduus*) belongs to the very similar genus Cnicus. There are no ray florets; but the outer disc florets have such long styles that, growing as they do outwards rather than erect, they well represent ray florets! Dotted about the alpine desert, these queer vegetables, like the woolly Saussureas and giant Sorrels, at once attract attention. We might be on another planet. No writer of fiction could imagine plants on the moon or on Mars, half so grotesque as these.

But perhaps the most fascinating alpine flowers



ON THE TOP OF THE WORLD

are the *Cremanthodiums*, whose heads of acid yellow, or plum-juice purple, nod over the grass slopes, and earth fans, or by streams slithering down the fluted cliffs. Half a dozen species occur in the Adung valley alone. Ray florets may be present or not, but if not, their place is taken by long involucre bracts; the leaves are sometimes large and leathery, kidney shaped, rounded, or arrow shaped, but in one delicate species, much divided and almost fern-like. This last is one of the most charming of all, the tapering ray florets being drawn out into a cone of faint amethyst spun glass, the whole flower-head poised on a flexible stem, contrasting with the leathery leaves, dark green above, deep wine-purple beneath. A shock of long roots anchors the plant in the sliding scree.

Then there is a *Cremanthodium* whose wisps of stems carry pale yellow flowers clasped by a collar of green velvet bracts. This species grows amongst the crouching scrub, shedding a sunny radiance over the hummocky slope. In late summer the flowers darken to red, then crimson.

On high earth-slides where the first trickling streams are born, grows a third species of *Cremanthodium*. The dusky purple flowers are deceptive; there are no ray florets, though the pallisade of bracts gives at first sight the appearance of a ray. Fourthly, a large-headed yellow-flowered species,

THE ROMANCE OF GARDENING

whose fringed suns may be seen rising over any steep glen, where the echo of grinding gravel, loosened by the rain, is the only sound heard. Leaves and stems of these cliff grown plants are green; but the same plant is equally at home in the wet sand of the silted rock basin, where it forms colonies which obstruct the flow of streams, much as Marsh Marigolds do in England; and here leaves and stems are purple. It is a larger plant than the others, the main stem bearing several flowers.

Finally, a certain dwarf species is perhaps the daintiest of all, for it stands no more than three inches high, the stem appearing almost too short for the wide-eyed flower. It resembles several other species, both in the colour of the flower, and in having no true ray florets (the bracts again doing duty), but apart from its size, the leaves at once distinguish it from any other known species of *Cremanthodium*, for they are finely dissected. This plant avoids the raw screes and cliffs and the wet sand beds by the stream, making its home on the warm and soft turf slopes, where it consorts with a host of alpine flowers, such as *Gentians*, *Pedicularis*, *Primulas*, and *Anemones*. Here it grows in countless nodding hundreds, being by far the most abundant species. Here and there a pallid yellow — not white — flower appears, a dainty lovely thing; but this is extremely rare. Indeed I saw only three or four plants amongst

hundreds. It might be a hybrid. But hybrid plants are seldom seen in nature; more likely it is a variant of *C.* No. 9874, of which it is a replica, lacking only the purple pigment.

But the *Cremanthodiums* do not love our English weather and few have been seen in this country. The seeds germinate well enough, but the young plants perish even before they flower. The scented *Cremanthodium* promises better than most. From a rosette of large dark green leather leaves, pressed flat to the ground, springs the stem, bearing a single nodding yellow flower. The remarkable thing about this plant is its aromatic scent, a strangely pleasant scent which pervades the whole plant, flowers, leaves and fruits, but especially the fruits. It is when the seeds have been collected and dried that this delicate scent is strongest. Could the plant be grown in quantity, there would doubtless be a market for the seeds to make 'lavender' bags! Moreover, in these humid mountains, scented flowers are rather exceptional; and though the cause of the scent here seems to pervade the plant, it does faintly touch the flowers. Scented plants have generally, like many of the dwarf *Rhododendrons*, scented foliage; that is, they are aromatic rather than fragrant.

There are other things in these mountains besides flowers to claim our attention, however. The

THE ROMANCE OF GARDENING

history of a hundred centuries has scored itself indelibly in this valley. Streams gurgle between the smooth flower-carpeted hummocks of rock now; but no power on earth, save moving ice, could have carved out those bosses, or scooped this wide channel. This high valley, suspended between the deep forested river gorge below and the shattered pinnacles which prick the foaming cloud above, once gave birth to a glacier. The whole valley was under ice; nay, the whole vast country was weighted and pressed down with ice. There were no flowers here then. They have come since the ice disappeared — slowly, gradually feeling their way back. Whence did they come here — and when? That is one of the most fascinating problems the botanist has to solve. We can only tell whence they came as we trace them and their nearest relations away from these arduous mountains, away to other lands, north, south, east or west, patiently, and persistently. Trace them we can, many of them, to China, to India, to Tibet. But of course many of them occur nowhere else but here, in the Burmese Alps.

So our notebook is rarely idle. As we climb, we collect plants, some of them new, all of them rare and much wanted. Notes are written from time to time, often with numb fingers and in driving rain: how this species is abundant, that one uncommon: the colour of this flower, some curious feature about

ON THE TOP OF THE WORLD

that one — its scent perhaps, the company it keeps, its insect visitors, or the peculiar places where it grows. Then there are the rocks, and their history: crystalline, stratified, altered by heat and pressure, calcareous or not. And, arising out of that, the various types of soil. Hark, what was that? A weird harsh cry! Could it be human? More like a peacock, I thought, a single rather plaintive cry, uttered again and again. Looking up the grey scree, I caught sight of the two sentinel birds standing alone on a rock, giving the alarm, while above them, in ordered retreat, strutted six or eight birds, disappearing leisurely into the mist. Even at a distance of fifty yards I could make out the turquoise-blue patch round the eye of this gorgeous bird (Sclater's monal, *Lophophorus sclateri*) the crimson back, ring-spotted blue throat, and short blunt beak. It is one of the most gaily coloured pheasants in Asia.

Scrambling on up the valley over a carpet of flowers, and finally over rough beds of boulders, we at last reach the col, at a height of more than 15,000 feet. The last bit of the climb is very steep, and wet as we are, we throw ourselves down on the short turf, breathless and exhausted, before turning to enjoy the view. And a wonderful view it is, for there comes a break in the clouds, and for a fleeting minute, the whole panorama of mountains to the west bursts into view. Right below us, the ice has

THE ROMANCE OF GARDENING

dug its own grave, a deep yawning trench where not even the corpse of a glacier remains; dust to dust, ashes to ashes, ice to water, and so away to the *ewigkeit*. Black and terrible, the cliffs rise before us on the other side of the valley, and beyond that, ridge upon ridge, awkward and jagged and above all — *angular*. No soft outlines here, no beautifully moulded forms, no mantle of vegetation flowing evenly over the distant hills. All is virile; even the evidences of decay — for these mountains are very, very old — are scarcely noticeable on so bold a landscape. Out beyond the farthest rock ridge on the skyline rises a great range of white peaks, with glaciers rolling down their flanks from wide snow basins. They guard the sources of the Irrawaddy, the great wealth-producing river that is Burma. Then the cloud comes boiling up again, and the vision fades out slowly. The drumming of the rain and the whistle of the wind announce a change of picture.

But we have much to exercise our thoughts, and anyhow it is too cold to sit here long. There are many plants in my bag. I sort them out, and write a few more notes in a sodden notebook. Then we eat a hasty lunch consisting of a few raisins, a slab of chocolate and some pemmican, which is a thick and nourishing soup, hot from the thermos flask we have brought. This revives us; and presently we



ON THE TOP OF THE WORLD

start back for camp, following a different route; over the ridge into the next hanging valley. Two hours later, after a breakneck descent down an escarpment which unexpectedly interrupted the steep slope, we reach the marsh in the lower valley, and our snug camp.

Our Burmese cook, Ba Kai, who has everything ready against our return, greets us and helps us off with our wet clothes. Dry warm clothing has been toasting over the fire for an hour, and we are soon warm again. Then tea is brought in and we sit down to a simple yet substantial and welcome meal, while we talk over the climb, or read our books. It is late when we finish our tea, and the short day is drawing to a close; for in these low latitudes — about 28° N. — the summer days are not so very much longer than the winter days, and there is hardly any twilight. We have an hour before dinner, and I get out the day's plants, check them over, amplify my notes, and attach tickets corresponding to the numbers in my field notebook, to distinguish them. Then I arrange them between sheets of drying paper, and put them in the press. By the time all this is done, it is 7.30 (summer time) and I order dinner. A plain meal to-night — pemmican soup, a curry of onions, fungus (from the forest) and army ration, with rice, which is the principal course, and sardines for an entrée; chuppatties with butter and jam and a cup

THE ROMANCE OF GARDENING

of tea to finish up with. We linger over this adequate but not sumptuous repast for an hour, talking. Then the table is cleared and out come our diaries, and reading books, or some old newspapers which the last mail runner brought two months ago. The diary is an important document; it is written up last thing every night, and records the day's doings, any observations, in general terms, all discoveries, perhaps a few deductions, and occasional thoughts on other topics than exploration. It is also the only source of the correct date; without it, time passes, and one knows neither the day nor the date. It may be interesting to give a few typical extracts from the diary kept during my last expedition to the sources of the Irrawaddy in 1930-1, with Lord Cranbrook.

'March 23. Gorgeous day, slight ground frost. Almost continuous sunshine, only a faint breeze, lovely moon to-night suspended like a silver cradle over the snow peak. Took photographs, developed, packed. A Daru came in after tea, badly bitten in the arm by the headman's dog — a savage brute. He had three bites in the arm, and one in the buttock, all done yesterday and already poisoned. I did what I could with antiseptics, and bound up the arm. Photographed *Rhododendron seinghkuense*. Flies visit it freely, especially a species of hoverfly; but these play no part in pollination, which is done by

bees. It is possible that small birds occasionally visit the flowers.

‘The birds begin to sing about 5.30 a.m. in this fine weather. A sunbird is one of the earliest abroad, and he works late, too, though not so late as the dippers.

‘Generally, the leaf buds of Rhododendrons begin to break so soon as the flowers are over, at least on plants of flowering age. On barren shoots, however, and on non-flowering plants, the leaf buds usually break at the same time as the flower buds.

‘The Tibetans are busy in their fields now, ploughing and fencing. The wooden ploughshare is a mere pointed trowel, not even iron shod, which scratches a narrow furrow, perhaps six inches deep. But the Tibetans manure their fields heavily with stable litter — Pine needles, leaves, and dung all mixed up together. The Darus are also at work, cutting down forest, burning and weeding.’

The next entry was written as the result of a plant-hunting excursion from our base camp in the Adung Valley.

‘April 20. A fine sunny day, fresh breeze in the valley, clouding over after sunset. I went for a big climb with a Daru coolie as guide, my objective being the cliffs on the south side of the river, where the scarlet Rhododendrons grow. We ascended to

THE ROMANCE OF GARDENING

the terrace 500 feet above, on which two Daru huts are situated. These huts are like the pigsties seen at home — square boxes of rough hewn logs, 3-4 feet high, the walls not meeting the thatched roof by a good two feet. Crossing some cultivation, we reached the foot of a ridge thickly overgrown with secondary jungle, and then we came into real forest. This ridge has been swept by fire a few years ago, and it was interesting to see what plants had sprung up — nearly all from wind-borne seed. Literally thousands of *Rhododendron magnificum*, three to four years old, with ruddy leaves of the current year fully expanded; an occasional *R. tanastylum*; Alder; Birch; *Pentaptyxis stipulacea*. I could not see what grew on the flanks of the ridge, except the common trees, *Sorbus foliolosa*, and *R. Genestierianum*.

‘Higher up, the entire mountainside had been scourged with fire, leaving only the scarred and blackened stumps of trees. *Rhododendron sino-grande* and the blood-red species grew here, and were in full bloom — a gorgeous sight. As we approached the granite cliffs, the face leading up from the ridge became precipitous, and over the warm black earth stretched sheets of *Primula eucyclia*. There were pheasant nooses here, for snaring Temminck’s tragopan, and wicked-looking *panjis* for spiking “gooral” (which are chased by dogs, and fleeing, impale themselves). In the scuppers lay piles of dirty snow,

and the earth was rich with vegetable debris which had accumulated on the snow, and been left to form a new film over the earth as it melted. In the rock scuppers a dense scrub of "Neriiflorum" Rhododendron was still in good bloom, mixed with Bamboo (*Arundinaria*). On the smooth granite cliffs grew clumps of a dwarf Rhododendron with blush-pink flowers something like *R. Martinianum*, *R. aureum*, and other species; together with *Berneuxia tibetica*, Anemone, Diapensia, Willow, and other plants, all in bloom. The cliffs are very difficult to climb, steep bare granite walls with slanting grooves and impossible chimneys. However, we collected a lot of plants, ten or twelve species; the Rhododendrons were in bloom right up to the snow and beyond. I was unable to go any higher; as it was we got back at 6.30 — my biggest climb yet, and the most productive. I saw in bloom seven Rhododendrons . . .'

Thus the diary rambles on, day after day, with notes on the birds, or the ways of the villagers eking out a harsh existence in that mysterious valley, on the rocks and the soils to which they give rise, and many other subjects. But as a botanist I am of course most interested in the plants, and it is those which fill the bulk of the diary. Whether we are on the march over those tortured mountains, or resting in camp, or scrambling through the forest, there is

THE ROMANCE OF GARDENING

always something to be said about the trees and flowers.

And then after the summer deluge, autumn creeps down stealthily. The rains abate, the cloud rack dissolves and dissipates itself slowly. Then one evening the sun sinks in a glamour of red gold behind the edge of the world. Down the valley the full moon is rising over far-away China, and the crimped mountains loom up raw-rimmed against the stars. An owl hoots softly; and the shrunken river sings a lullaby. Then the silence is cleft in twain terribly by the thunder of falling rock, as though the veil of the earth itself were rent: and silence once more.

Dawn comes tardily, pale at first, but quickening to life as the sun climbs the ranges and sends a fascia of light to touch off a myriad sparkling frost crystals. We are up and away early in order to enjoy the view from the heights. Out on the cold scree the flowers are parchment-mossy Saxifrages like clusters of yellow beads; vivid blue Gentians waiting for the sun to limber their stiffened trumpets; dwarf Monkshood, whose sleek flowers look like crystallized violets, but will presently be none the worse for the cold nights they have spent at 13,000 feet; sky blue Corydalis, not so frail as it appears! Potentilla bursting into starry yellow flowers on the edge of last year's still melting snowdrifts, and many other late comers. The day is spent seed collecting, how-



A new Aster, orange and violet. 12,000 feet. Burma Frontier

ON THE TOP OF THE WORLD

ever; and in the lilac dusk we wander back to camp, tired and happy. Some of the finest alpines discovered last summer have been safely located, and ripe seed collected.

In the years to come, though we may never again tramp the top of the world, yet what we saw and felt and did in those hectic days may be recalled to us by the sight of these flowers treasured in English gardens.

CHAPTER XV

FROM CHINA TO CHELSEA

EVERY year there bloom for the first time in England a dozen or more new plants; I don't mean 'named varieties' but new species raised from seed collected in the Andes, or Tasmania, or Tibet, or China, or the Balkans. A certain number of these new-comers are my own children; it may be only two or three years ago, or it may be eight or ten years ago that I found them on the Assam Frontier, or in far Northern Burma, or beyond the Himalaya, collected seed, and sent it to England, in order that Englishmen might see something at least of what I had seen. Others were raised from seed sent by other plant collectors,¹ or by travellers, or residents abroad. These plants of mine then are my large family; I keep in touch with them always, through my friends, though I do not grow more than one or two of them in my own garden. But though they are boarded out, I still regard them as my own family, since the pangs of bringing them into the world were at least vicariously mine. When I am in

¹ Notable names are: the late Mr. G. Forest, and Mr. J. Rock (China); Mr. H. F. Coomber (Tasmania and the Andes); Mr. E. K. Balls (Persia and Turkey).

FROM CHINA TO CHELSEA

England, I receive many letters as to their welfare. A friend writes to me: 'Dear K.W. Your 9509, called "Goldilocks" is in flower. Come down for the weekend and tell me what you think of it.' Goldilocks is merely my pet name for the plant, given it at the time of discovery for the same reason that any other name is bestowed, namely to distinguish it from its fellows. So off I go to be re-introduced to one of my own children. But what a change is here! At first sight I scarcely recognize this trim shrublet wreathed in blossom as the mis-shapen and weather-beaten bush which nevertheless thrilled me five years ago on the roof of the world. Yet even then I had penetrated its outward untidy appearance, recognizing the aristocrat beneath the shabby exterior: and here it was well set up and faultlessly tailored. In all but the flamboyance of its wild blooming, it is a neater, sweeter plant than when I first set eyes on it. But the flowers? No, here it is shy and reticent; up there on the windswept cliffs, though dishevelled, there was a certain air of defiance in its arrogant flowering. In its newly acquired home, with abundant room to develop, with light or shade, and air and water as required, with specially prepared soil, with doctors in attendance, and someone to wait on it hand and foot and anticipate its lightest whim — and above all with no jealous rivals struggling to snatch more than their share of these good things — it *ought*

THE ROMANCE OF GARDENING

to look well. And so it does. As for flowers, this after all is its first time of flowering; in two or three years no doubt when fully grown, it will be a noble sight, and already I feel a glow of justifiable pride as I gaze at it. Surely, I think, you are a credit to me! I hardly dared hope when first we met, that you would ever look so magnificent. You didn't look it, you know, and yet you had an air about you I liked more than a little! The breeding of the aristocrat was there. But what a vile day it was — do you remember? No, of course you don't! *You* weren't born, it was your mother I met. *She* grew on that harsh grey cliff across the raging river, 2000 feet above my camp. And on a blustering May day, when the snow still lay in wads under the trees, and the spluttering clouds raced over the hills, came the first whisper of blossom, and the cloying fragrance distilled from swelling buds. I ascended by the scree, and reaching the apex of the cone where the coarse gravel had been sprayed out of a crack in the cliff, hauled myself up. Then I sat down to enjoy the most stupendous view imaginable. A hundred peaks poked up their heads in every direction, slashed through, tortured and crippled by rushing torrents; the muffled roar of tumbling water came up to me on the wind. Dark forests clung patchily, like moulting fur, to the grim slopes, and thinned out above where the rocks were stippled with snow. And in

places the snow was crimson: molten rivers trickled down into flaming pools of red hot lava as it seemed; only they were Rhododendrons. The colours were splendidly barbaric. And after a rough journey across the frozen face and along a knife-edge ridge, straddling to keep my balance, afraid to stand up, I reached her — your mother, the ‘Scarlet woman’. And here you are, the ‘Scarlet woman’s’ children, all doing well. I hope your mother still lives in far-off Tibet.

But to return to this great family of mine. It is probable that every year some of my offspring disappear, never to be heard of again. Some perish outright; a few are of common clay and mingling with the herd are lost sight of; not being new, their identity is not kept up. Of the survivors, the majority are destined to be rare plants for many years: few people possess them, and naturally they are not willing to part with them. But *one* is perhaps marked out from the beginning for a great future. Within a few years, it has taken its place amongst the elect, been welcomed by the world. That is to say, it has become everybody’s plant. Every nurseryman, or almost every nurseryman, has a stock. It is mentioned in catalogues. Perhaps seed of it can be bought. The plant is on the market. Thus it was with the Tibetan Blue Poppy, *Meconopsis betonicifolia* (*M. Baileyi* of catalogues).

THE ROMANCE OF GARDENING

Plant hunters who rhapsodize extravagantly over their discoveries should cultivate a sense of proportion. We may feel complacent about our Rhododendrons, our Primulas, our Barberries, our Lilies, our Gentians, our *Nomocharis*, and all the rest of the very latest introductions; and certainly I myself will not deny that when I think of my own small contribution to English gardens, I feel mighty pleased with myself; probably out of all proportion to my real deserts. But their influence on English gardens in general is often negligible. The appeal of many of our latest novelties lies rather in their novelty than in any intrinsic merit. A new plant appeals irresistibly to the skilful and experienced gardener; it is a challenge. If he can grow it, he has accomplished something, no matter if he does not even succeed in keeping it. If it is not worth growing, the more's the pity. That does not detract from his skill.

That the charm of many a new plant lies chiefly in the newness can be shown by a very simple proposition. Who would not leap with joy to have had the good fortune to discover the first Foxglove, the first Primrose, or the first Snowdrop! Yet how little notice do we take of these to-day! Not that we turn up our noses at them. Still, we do rather neglect and overlook them. We want something more exotic, more bizarre — in a word — more new!

FROM CHINA TO CHELSEA

Many of us would rather grow Chinese Primulas than English ones. But the first plant lover in these islands was lucky indeed, no less than are his modern descendants who to-day scour Western China or the Andes. What a thrill it must have been to set eyes on Gorse and Heather, Bluebells, Marsh Marigolds, Kingcups, and a score more flowers for the first time; just those flowers which by their beauty, their numbers or their surroundings make England so very English! Perhaps they still thrill us really, deep down, only we are too sophisticated to notice it. If we are thrilled, we do not show it; a mellower enjoyment is evoked by the contemplation of familiar flowers. Certain it is that a dweller in the desert who pays his first visit to England might envy us.

A plant, however beautiful — and the great British Public has its own ideas as to what is beautiful — has no chance of popularity, unless it is a good doer. It is for the connoisseur. The British public is not interested in rarities as such; still less has it any desire to try its skill on a second-rate plant when it can get first rate ones at the same price. The astonishing success of *Meconopsis betonicifolia Baileyi* was due at least as much to the ease with which it could be grown as to its sheer beauty. Its rise to fame was meteoric. I found it growing on the wooded mountains which hem in the Tsangpo valley in Tibet, some 200 miles east of sacred Lhasa, in 1924,

THE ROMANCE OF GARDENING

and sent seed to England in February 1925. It was sown in half a hundred gardens in England, Scotland and Wales, and the keenest and most skilful gardeners in the kingdom sat back and waited with nothing but my description of its azure-blue silken bubbles floating on seas of meadow flowers, and those puny green seedlings, to sustain them; for the seed was good, and had weathered the long journey well — at least 75 per cent germinated. The plants grew throughout the summer of 1925, and died down. Then, in the spring of 1926 they began to grow rapidly again, and everyone caught their breath, and breathed a prayer and waited and watched. The prayer was answered.

In June 1926, the Tibetan Blue Poppy was exhibited at the Royal Horticultural Society's show, and it received an immediate and unanimous Award of Merit. In 1927, the R.H.S. accorded it higher recognition, namely, a First Class Certificate; and in 1928 it received a gold medal at Ghent. In 1930 it was figured in the *Botanical Magazine*. Thus within five years of its introduction the Tibetan Blue Poppy had achieved fame and recognition. By this time everyone was clamouring for the plant, nurserymen were exhibiting and stocking it (more than one catalogue was decorated with a coloured photograph of it) and it was slowly but surely becoming known, filtering through to the small gardens. In

FROM CHINA TO CHELSEA

1927, plants a few months old were being sold at the Chelsea Show at a guinea apiece. By 1932 seeds were being sold in shilling packets. Yet to-day, nearly ten years after its introduction, *Meconopsis betonicifolia Baileyi* is still listed in nurserymen's catalogues as a 'new plant'!

Beautiful as a sheaf of Blue Poppies in full bloom undoubtedly is — and those who grow scores of it assure me that it is the one sight which brings every visitor up short, with a gasp of astonishment mingled with awe — yet I do not myself regard it as a first class garden plant. The flowers are beautiful beyond belief, of perfect form, an incandescent Cambridge blue with a fountain of golden stamens shivering and shimmering in the centre; but they are too volatile. Within a fortnight of the clump's opening its first flowers, the plants are beginning to look shabby; and I doubt if the flowers show for three weeks, unless the weather is almost unbelievably kind. Without flowers the plant is nothing; and is that crowded fortnight of glorious life worth fifty weeks of oblivion? Yet it has obvious merits. Given shade and moisture, it is not at all difficult to grow; it is hardy; it is perennial; and in some gardens it even sows itself. I am more contented with the Giant Cowslip Primula (*P. Florindae*) discovered in Tibet at the same time as the Blue Poppy. Had not the latter taken the horticultural

THE ROMANCE OF GARDENING

world by storm, *Primula Florindae* would have achieved fame, for its charms are more substantial than those of its beautiful rival. Its great virtues — besides the ease with which it can be grown and its proved hardiness — are its lateness of bloom and its lasting qualities. It scarcely begins to open its sunny umbels, hoisted on the summit of three foot waxen white poles, till July, when the majority of Primulas in the south of England are down and out; and it lasts far into August. In the heat of high summer the hundred-tasselled mops are brimming over with scented flowers, which continue to bubble up from the heart of the mop. Another species of Primula from Tibet, *P. alpicola*, deserves to be better known. Though easily grown, it is still a comparatively rare plant; its wide range of colour — soft white, pure moonlight-yellow, crushed strawberry, purple, twilight-violet — ensures it a place in every bog garden. But the drought of 1933-4 tried it hard.

Then there are the Rhododendrons, of which I have discovered and introduced into cultivation about fifty species. One of my favourites is 'Purple Emperor' as I named it — *R. imperator*. I discovered one plant of this dwarf shrublet plastering a rock slab at the top of an almost unclimbable chimney on the Tibetan frontier in June 1926. How well I remember the day: it was the first day in my alpine camp, when I had after long effort at last

escaped from the toils of the sticky Burmese jungle below, out into the pure snow-chilled air of the alpine meadow at an altitude of 10,000 feet. The snow was melting fast on the high mountain ranges where the Irrawaddy rises, on the Tibetan escarpment, and a stream of ice-cold water came sluicing down the rock scupper above, tossing spray in all directions. How I hated that gully — the cold, and the wet, and the gloom of it; but I knew it for the sort of place where rare plants lurk, so up it I went. Then came the chimney, and I shivered with fright. Oh! surely it wasn't worth while going any higher! Perhaps I couldn't climb it; in my heart I almost hoped I couldn't! There wouldn't be anything in the chimney, or above it either, the sides of the gulley were smooth wet granite. However, the day was young; I might as well go on until I could climb no farther — it was no use returning to my lonely camp before tea time, the day would drag if I did. So up the chimney I scrambled, in fear and discomfort, with water splashing down my neck, and percolating into my boots, until finally with a gasp of relief, I sprawled out on to a slanting slab of rock at the top. And there, on the rock, likewise sprawled a dwarf *Rhododendron* mat, set with purple trumpets jutting out borne on threadlike stems amongst the tiny sharpened leaves. It was Purple Emperor. In the autumn I returned to the hideous gulley, and

THE ROMANCE OF GARDENING

climbed the chimney — water had ceased to drain into the scuppers then, and I accomplished it easily. From the Rhododendron mat I collected six or eight capsules, no more; all I could find. A few hundred seeds were sent to England early in 1927. They germinated well, and three years later *R. imperator* flowered for the first time. Since then it has flowered regularly with greater exuberance each year, until now you may see plants not two inches high, but eight inches across, so smothered in bloom as to hide every leaf! No nurseryman in the country stocks it. It is unobtainable. Few amateur gardeners possess so many as half a dozen plants of it, and those are precious. Probably there are not five hundred plants of *R. imperator* in the country.

In the inhospitable Mishmi Hills, at the back of the Assam frontier, I found *Rhododendron patulum*, another dwarf carpet-weaving species. When I first caught sight of it glued to a cliff face, its gaping purple flowers strung out like Rock Roses, I did not imagine this was a Rhododendron at all! So I christened it Rock Rose. It was on a squally day of driving rain and clammy mist that at 12,000 feet I found Rock Rose. Winter wind had scalped the shoulder of trees, and even those on the lee side which had dared to poke up their heads above the level of the parapet had had their heads bitten off by the blast. On the weather side, sewn into the



turf, were the thready stems of Rock Rose, bearing tiny leaves and a crop of lurid flowers. But finding the plant in bloom was as nothing compared with the smash-and-grab raid I undertook to get seed of it. The turbulent Mishmi had threatened reprisals if I went up their mountain, where they hunted gooral and snared pheasants; they said in their lordly and feudal way that I would disturb the game! So with two faithful native followers I dashed up the ridge, prepared to spend two nights in a miserable cave, rather than return without Rock Rose. The cliff face to which it cleaved, what with snow and sludge, was a butter slide, and I spread myself out and slithered down it indecorously, before I had finished collecting the dozen capsules in sight.

Then there is *Rhododendron riparium*, another rock garden undershrub, whose large flaming purple flowers froth over a surf of sea-green leaves, singed toast colour beneath. There ought to be plenty of this lively bushlet in the country, for I first collected it in 1924, and again and again and again between 1926 and 1931, to ensure securing the best forms. Yet it is rarely seen in the smaller country gardens. The same may be said of the beautiful *Rhododendron leucaspis*, whose maidenly blooms open in February, and, if not blackened by frost, strike a joyous note of spring. There is a prevalent belief that Rhododendrons are flowers of late spring or early summer, yet

THE ROMANCE OF GARDENING

there are few more inspiring sights than the tops of the Rhododendron trees fired with blossom while the whole forest is quenched in snow; a sight which you may surely see at the dawn of the year on the Himalaya by-pass eastwards of Sikkim. These plants are naturally prone to flower even earlier in Britain, deceived by the weak but genial January sunshine; and it is quite common for *Rhododendron mucronulatum*, the hybrid *R. praecox*, *R. leucaspis*, and several other species to flower before the end of January. A mild February, and still better (though rarer) a mild March, will entice many a Chinese or Tibetan Rhododendron into bloom; and although the bulk of the species flower in April or May, an ever increasing number of winter flowering species are being discovered. Some species (e.g. *R. yunnanense*, and *R. lutescens*) which flower in the spring, will often flower a second time in early winter. The Silver Barberry (*Berberis hypokerina*) is another remarkable plant, very unlike the popular idea of a Barberry. On its own ground, which is the Burmese Oberland, it is a rare plant; but on the home front it is even rarer, although plants have already been raised from home-grown seed. Not a nursery catalogue in the country lists the Silver Barberry — it is not procurable.

I must wait a long time before some of my children grow up. There are big Rhododendrons

FROM CHINA TO CHELSEA

which will not flower till they are fifteen, twenty, perhaps even twenty-five years old. For instance my *R. fictolacteum*, collected near the monastery of Muli, Eastern Tibet, in 1921, and now twelve years old, has not flowered yet. Plants in this country, though robust, are hardly three feet high; there was a grove of *R. fictolacteum* in the forest behind the monastery (the monastery hung betwixt heaven and earth, halfway up the stupendous yellow cliff) and every tree was forty feet high, and bulging with blossom. The trees must have been a century old. But even that pales before *Rhododendron magnificentum*, discovered on the Burma-Tibet frontier in 1931. A tree on the river bank near our camp was fifty feet high, and nearly six feet in girth towards the base. It bore over 800 trusses of flowers, each truss with twenty-five to thirty big bell-shaped rose-purple corallas. It is one of the most flamingly magnificent Rhododendrons imaginable. As the diameter of the trunk, a couple of feet off the ground, was about eighteen inches, one begins to get some idea of how long that tree had stood there. Rhododendron wood is extremely hard and close knit. I have here as I write a section cut from the trunk of a small specimen of *R. sino-grande*, about two and a half inches in diameter: the rings show it to be not less than forty years old; and that glorious tree of *R. magnificentum* could hardly be less than

THE ROMANCE OF GARDENING

150-200 years old, at a conservative estimate. There are now hundreds of seedlings in this country; but they are not likely to flower much before 1950, and we shall be well on in the twenty-first century before the tree begins to look anything like what it looked like in Burma. *I shall not see it; but then I have seen it.*

It is mournful to reflect on the deaths which have left gaps in the family. Where to-day is *Campanula calciphila*? Back where it was, I suppose, on the jagged limestone ridges of Western China whence it paid an all too brief visit to this country before disappearing into the *ewigkeit*. How I lacerated myself when with numbed fingers I collected the shrivelled gristle-white capsules of this gem, regarding every seed as worth a gold nugget! There was little of it, but it flowered in England, and was shown at Chelsea, and photographed by the Gardening Press. Then it died; nor has it been seen since.

Primula Baileyana lasted longer; it lived to receive an Award of Merit from the Royal Horticultural Society; but it, too, died. The incomparable cushion Forget-me-Not (*Myosotis Hookeri*) from the high Alps of Yunnan and Szechwan, I have also brought to Britain — and it went home, right home, after opening its first flower. The Maroon Meadow Primula from the alps of Assam fared no better, which was cruel luck considering the effort it cost

FROM CHINA TO CHELSEA

me. It grew far down a steep gravel gulley, which one descended from the hog's back ridge, sliding and slipping through the lush growth. Well, one had only to return and camp on the ridge in October, and it would not be difficult to spend a couple of days collecting seed of it. Then in July, during the worst of the monsoon, we dropped down the mountain to the village in the valley, 4000 feet below, and the truculent tribesmen turned sour. Back, down the valley, never to return to Tablekon, was the burden of their song. So back we went, a long day's march, and camped again. From this base we attempted to find a new route up the mountain. We spent weeks in August and September forging our way towards the distant invisible goal, where the alpine flowers grew. We hacked our way through the almost impenetrable Rhododendron scrub, sometimes gaining a hundred yards, sometimes maybe a quarter of a mile, drenched with the stinging rain, lashed by the wind; and so back to camp, to await another opportunity to attack. Then one day in October we stood on a hummock clear of the trees, and looking across the hollow, through which the rain mist swirled, we saw our goal quite close, looming through a rent in the veil; the way was clear for an instant. Almost immediately the summit was again wrapped up in that perpetual curtain of mist; but tired, wet, and cold

THE ROMANCE OF GARDENING

as we were, we returned to camp happy. Two things remained; to crown our efforts by actually reaching the mountain top, and to find the Maroon Meadow Primula, now in seed. After a night of awful storm, I arose in the grim darkness of a late October dawn, breakfasted hurriedly by candle light and started on the long weary climb. At mid-day, having climbed 3000 feet and marched five miles through the drenched scrub, I emerged at last on to the open face. Swathes of meadow flowers grew all round me: and not far away, the last peak poked up its head. On and up. Suddenly I stopped; something springing from the turf caught my eye. It was — it was — the Maroon Meadow Primula! There was no mistaking its leaves, its long cylindrical parchment capsules. And having spotted one, I spotted a dozen, a score. It was widely scattered over the flank of the mountain where the meadow flowers flickered, and I searched for an hour, two hours, till I gathered thousands of seeds . . . but why go on with the sad story! The seeds reached England safely, they germinated, plants were raised. My hopes ran high — those drooping, delicately-scented, wine-red bells swinging from a slender mast — *Primula rubra* — my own fairy child snatched from the most merciless mountains on the Indian frontier, after eight months of moist green hell! That was four years ago, and Chelsea has not

FROM CHINA TO CHELSEA

seen the Maroon Meadow Primula yet. All are dead!

On my return journey from Tibet in 1933 I came back over the Mishmi Hills down the same valley that we had explored five years previously. Eagerly I searched for the lost Primula. But I saw no sign of it, and it may be many a long year before seed is again secured from the exact spot where I first discovered it.

CHAPTER XVI

THE OWNER GARDENER

IN the first chapter I said that there are no rules for gardening; our knowledge of plants is still mainly empirical, and that which succeeds is best. Obviously this statement must not be taken too literally. There is, of course, a certain technique of gardening. We could not do without our calendar of gardening operations which represents a store of knowledge acquired by years of experience. This however is only the skeleton. We must cover the bones with flesh and breathe life into it each according to his skill and imagination. When it comes to growing plants, every man must write his own book of experiences. Some do. Of late years, an extensive and pleasant literature of books written by the owner gardener has sprung up: books written by people whose gardens cover anything from one to five acres, who keep one gardener and who spend from five to thirty-five hours a week gardening — as opposed to pottering in the garden. There is something very engaging about the owner gardener. You can always tell him — though you can't tell him much about gardening. He twiddles with a piece of

THE OWNER GARDENER

bass, while telling you with a seraphic smile that his boy is playing rugger for the varsity to-day. He carries labels in his pockets, and they are always popping out at unexpected moments, as when he is feeling for a box of matches, or blowing his nose. He stops you on a walk to point out a Pine tree, black and jagged as a cinder against the still smouldering sunset sky; and the tresses of Silver Birch in winter, trailing on the wind. The owner gardener is a peaceful, law-abiding, conventionally English, person with a deep insight into the hearts of men. For does he not understand plants? and their whims? He has a sense of humour too, and is generous to a fault. Nothing pleases him more than to share his best plants with his friends; he would sooner give you a plant than accept one. Indeed there is a wonderful freemasonry and communion amongst gardeners. They talk a common (or garden) language, which is neither jargon nor technical. Thus: 'it does not do with me' in reference to a plant which is not happy; 'after the drought it went home'; 'it went back on me last year' meaning that it languished, and 'it will come away next year' — that is to say grow. He has a favourite plant, usually something slightly exotic like *Eremurus*, *Hypericum*, *Paeony*, or *Clematis*; and on the subject of his favourite genus, which he collects from all parts of the world with assiduity, he knows more

THE ROMANCE OF GARDENING

than anybody else, botanists included. But the owner-gardener is modest, and it is difficult to get him to talk, though he has a profound knowledge of the ways of plants. When he can be got to give a lecture or to write a book, one realizes how much he knows — and something of one's own ignorance. As for the plants in his own garden, he knows each one intimately and personally. Walking round with him he will tell you stories about them. How he raised *Primus deprisceus* seed, which had never been done before. How he was given three plants of a rare *Caryopteris*, but did not know where to plant them, so he planted one where he thought it might grow, and one where his friends thought it might grow, and the third where no one thought it would grow — 'and that's the one you are looking at' he concludes. Then he stops before a fine tulip, and tells you with a chuckle how he stopped the war one day. 'I was commanding a troop of mounted infantry in Ruritania. At dawn one day we were out on patrol. The desert seemed quite empty. As it grew lighter, I noticed a group of low hills in the distance and on reaching them saw a clump of tulip beside a rock. I immediately halted my troop and dismounted. With a bayonet I dug up six plants which I put in my haversack. Then we advanced again. Those are the tulips; they came through the war safely.'

THE OWNER GARDENER

As a botanist and plant hunter, I am chiefly concerned with the flora of south-eastern Asia, and with introducing into this country those portions of it which it would be worth our while, aesthetically, to cultivate.

Thus I am especially interested in the plants' reaction to climate. I have already suggested that it is the invisible water in the air rather than the visible water in the soil which decides the fate of foreign plants in this country. Nevertheless I believe we pay far too much attention to climate and far too little attention to soil. If we could get the soil right for a plant it would soon adapt itself to our climate.

My reason for believing this is quite a simple one. There are certain plants from the alpine ranges at the eastern end of the Himalaya which we find ourselves unable to grow. Time and again we have tried, but with no permanent success. The seeds germinate, the seedlings perish. I need only mention a few of this sad company, such as *Primula Agleniana* and its allies, *P. Valentiniana*, *Meconopsis punicea*, and *M. speciosa*.

Failure is always ascribed to our climate and in particular to the lack of a snow blanket in winter. But against that has to be set the fact that some alpine plants from the same region do well with us — particularly the dwarf alpine Rhododendrons, Gentians, and some species of *Meconopsis*, such as

THE ROMANCE OF GARDENING

M. betonicifolia and *M. integrifolia*. All enjoy the same climate in this country: yet the Primulas in fact rarely come to grips with the climate since they often do not survive the seedling stage under glass. The Rhododendrons and Gentians survive, and even flourish outside. Therefore it would appear that the climate is not responsible, though of course one must allow something for differences of constitution and temperament. Some plants are more adaptable than others. The great preponderance of Rhododendrons on the mountain ranges of south-eastern Asia must be in part due to their adaptability.

If, then, our climate is not altogether to blame, what is left? Obviously, the soil. Soil is diet, or at any rate it contains an important proportion of a plant's diet. Its physical properties we can doubtless imitate very fairly; its chemical properties are a very different matter. Here we enter upon a vast field, and one which the owner-gardeners of England are doing a great deal to explore.

The soil is a vast biochemical laboratory in which a great many reactions are taking place. Not least in importance is bacterial action, which is always going on. The formation of acids and of salts is due in the first instance to bacterial action. Plants, like animals, may need minute quantities of those chemical substances called vitamins, to preserve a balanced metabolism. It is significant that many of



THE OWNER GARDENER

the Primulas which we have not succeeded in growing in this country, grow in vast colonies, literally touching each other, in certain localities. They are not scattered widely everywhere over the mountains, like so many alpins. I have noticed this particularly with *Primula Agleniana* varieties, and with *P. Valentiniana*, where the overcrowding may be such that the plants are growing half on top of one another. There may be a colony of thousands of plants, covering a few square yards of ground. Twenty yards away not a plant is to be seen. This is true also of *Nomocharis Souliei*. I can only ascribe it to some peculiar property of the soil.

The unstable English climate keeps the owner-gardener's interest perpetually on the alert. Drought, cold snaps, heat-waves, late frosts, wet summers, dry winters, and other plagues, assure him a succession of surprises. He loses some plants of course: but more come through safely. During exceptional years — and most years are exceptional — the most astonishing things happen. Thus the drought of 1934 made everything late, so that I found the blue Pea, *Parochetus communis* in fine bloom on my rock garden as late as October 1st, also *Erpetion reinforme*, the New Holland Violet. The form of *Linaria purpurea* known as Cannon Went was also in flower — it had been flowering continuously since July and so was the deep blue *Anagallis linifolia*,

THE ROMANCE OF GARDENING

one of the most flowerful rock garden annuals ever introduced. A friend gave me two plants, and for two months they were never out of flower — except at night. Every day one or more new flowers opened. The mango tree trick is not half such a miracle as the miracle of whence all the brilliant blue flowers of that frail annual are derived. The drought having put spring into summer, and summer into autumn, the mild weather and rains of December then proceeded to turn the new year upside down the other way on. December might have been March. Between Christmas day and New Year's Day, *Hamamelis japonica arborea* and *Daphne Megereum* were in wonderful bloom. Side by side, crowning an earth bank which forms the back of the rock garden, they looked very attractive. The low afternoon sun caught them, and made them glow visibly. I would sooner have them out at New Year, before the cold weather comes; and the same with *Rhododendron mucronulatum*.

This unexpectedness is half the fun of gardening. Plants may flower a month or two before their time, or be retarded. We all know how early spring flowers are 'forced' for the market. Plants which for years have refused to flower, suddenly find the temperatures in tune with their rhythm, and flower; others surprise us by setting seed for the first time on record. I had one or two plants of *Salvia vaticana*,

THE OWNER GARDENER

and was afraid lest I should lose them. So I carefully kept seed and sowed it. However, I need not have worried: the plant set seed all over the garden of its own accord, and the plants came up in scores till they threatened to become a nuisance.

I can grow *Anemone obtusiloba* on my rock garden; but I cannot grow *Voila pedata*, which is not a difficult plant. The successful cultivation of difficult plants is so largely empirical, hit or miss, that the more people try to grow them the better. Sooner or later someone will make a hit. It is probable that such plants will always be rare in this country; plants for the owner-gardener and the enthusiast, amateur or professional, rather than everybody's plant. They need a certain amount of attention, and the chances of success with them are not bright; even if they succeed one year they are quite likely to fail the next. The great majority of people who only garden over the week-end cannot afford to grow plants which won't grow. Thus there will always be a residue of rare plants which are in the catalogue, and a smaller residue of still rarer plants which have not got into the catalogues. These are for the high priests of gardening.

Only a few years ago there was not a single *Nomocharis* in the country. To-day there are probably a dozen gardens where these beautiful alpine Lilies are successfully grown, and three or

THE ROMANCE OF GARDENING

four species have been raised from seed. Their security of tenure may not be great, but the riddle of their cultivation is being gradually solved. That the alpine Primulas will eventually yield up their secret is also fairly certain.

Meanwhile the Royal Horticultural Society and its offshoots (the Rhododendron Association, the Iris Society, the Lily Society, the Alpine Garden Society) encourage the owner-gardener to persevere, especially with difficult plants. It is a dazzling thought that the most modest beginner who has only just become infected with the gardening spirit may straightaway succeed with a plant which has baffled the pundits. There is scope for adventure in the realm of science here.

APPENDIX

A P P E N D I X I

THE following list includes some of the principal plants I have introduced into English gardens from south-eastern Asia. The vast majority are hardy in some parts of the British Isles; and many of them are hardy in most parts. A few are greenhouse plants, e.g. *Paphiopedilum* (*Cypripedium*) *Wardii* and *Aeschynanthus*.

(A.M.=Award of Merit; F.C.C.=First Class Certificate)

A S S A M

Acer *Campbellii*
 caudatum, var. *multiserratum*
Gaultheria *codonantha* (A.M. 1933)
 Wardii
Leycesteria *crocothyrsos*
Lysimachia *ramosa*
Nomocharis *souliei*
Piptanthus *labernifolius*, var. *Sikkimensis*
Primula *Normaniana*
 polonensis
Rhododendron *crebreflorum* (A.M. 1934)
 deleiense
 Elliottii (A.M. 1934)
 exasperatum
 Johnstoneanum (A.M. 1934)
 lanigerum
 Macabeanum
 mishmiense
 patulum
 tanastylum

APPENDIX I

BURMA

Acer sikkimense
Berberis hypokerina
Clematis vitifolia
Gentiana gilvostriata
Geranium donianum
Lonicera hispida
Meconopsis betonicifolia pratensis (A.M. 1935)
 violacea
Notholirion campanulatum
Omphalogramma Souliei (A.M. 1929)
Paphiopedilum (*Cypripedium*) *Wardii*
Primula concholoba
 cyantha
 eucyclia (A.M. 1930)
Rheum palimatum
Vaccinium glauco-album
Rhododendron agapetum
 brevistylum (A.M. 1933)
 calciphila
 cerasinum
 charitostreptum
 eclecteum
 herpesticum
 imperator (A.M. 1934)
 insculptum
 keleticum
 nmaiense
 myrtilloides
 pruniflorum
 ravum
 recurvoides
 riparium (A.M. 1930)
 seinghkuense
 taronense
 vesiculiferum

APPENDIX I

CHINA

- Campanula argyrotricha
 calcicola
- Clematis ranunculoides
- Cyananthus incanus, var. leiocalyx
- Gentiana trichotoma
 sino-ornata
- Iris chrysographes
- Notholyrion hyacinthinum
- Rheum Alexandrae
- Primula Bulleyana, Ward's variety
 chrysopa
 effusa
 involucrata Wardii
 melanops
 pulvinata
 redolens
- Rhododendron aganniphum
 charianthum
 lysolepis
 melinanthum
 mollicomum
 niphargum
 pubescens
 ravum
 scabrifolium
 sino-grande
 sphaeranthum
 telmateium
 Wardii

TIBET

- Aeschynanthus bracteata
- Berberis Hookeri, var. glauca (A.M. 1932)
- Cassiope selaginoides (A.M. 1928)
- Cotoneaster conspicua
- Erythrina arborescens

A P P E N D I X I

- Gentiana Georgii*
 Waltonii
Iris Clarkei
Ligustrum yunnanense
Lilium Wardii (A.M. 1927; F.C.C. 1930)
Lonicera chaetocarpa
 Webbiana
Meconopsis betonicifolia Baileyi (A.M. 1926, F.C.C. 1927,
 and Gold Medal, Ghent, 1928)
Onosma Hookeri Wardii (A.M. 1927)
Parnassia nubicola
Primula alpicola violacea (A.M. 1926)
 atrodentata
 Baileyana (A.M. 1926)
 Cawdoriana (A.M. 1928)
 chungensis
 Florindae (F.C.C. 1926)
 ninguida (A.M. 1927)
Rhododendron arizelum
 auritum
 Keysii, var. *unicolor* (A.M. 1933)
 leucaspis (A.M. 1929)
 megacalyx
 pemakoense (A.M. 1929)
 pumilum
 rhabdotum
 scopulorum
 tephropeplum
 tsangpoense
 venator (A.M. 1933)
 virgatum, variety (A.M. 1927)
 xanthocodon

APPENDIX II

THE following list includes a few of the many *known plants* which are not in cultivation. We should like to have them. Some have been in cultivation for a few years, and been lost; the majority are known only from the descriptions of explorers, and from herbarium material collected by them. The list is necessarily very incomplete; it is given in order to disprove the statement that there are no more worlds for the plant hunter to conquer. No indication can be given of the plants which still remain to be discovered; they may be legion.

Most of the plants enumerated I have collected myself in Tibet, China, and other parts of Asia. Some of these are lost to cultivation after flowering for a few years. Others have never been in cultivation. For several from the southern Andes, I am indebted to Mr. H. F. Comber, who likewise knows them in their native homes, and has tried to introduce them. Mr. T. Hay, v.M.H., whose knowledge of uncommon and wished-for garden plants is unrivalled, has also furnished me with the names of some '*wanted*' — not by the police.

APPENDIX II

<i>Aconitum Brunonianum</i>	Himalaya and Tibet
<i>Alstromeria argenteo-vittata</i>	S. America
<i>Anarthrophyllum elegans</i>	Andes
<i>ornithopodum</i>	”
<i>Androsace coccinea</i>	W. China
<i>Arctomecon Mirriami</i>	Utah
<i>Argylia australis</i>	Andes
<i>robusta</i>	”
<i>Arnebia Griffithii</i>	N.W. India
<i>Begonia hymenophylloides</i>	Upper Burma
<i>Campanula calcicola</i>	W. China
<i>Cassia Arnottiana</i>	Andes
<i>Chaetogastra Lindenia</i>	Columbia
<i>Corydalis flaccida</i>	Himalaya
<i>Cremanthodium Wardii</i>	Burma
<i>Cupanea grandiflora</i>	Columbia
<i>Cuphea jorulensis</i>	Mexico
<i>Cyananthus Wardii</i>	Tibet
<i>Draba alpina</i>	Himalaya
<i>Eriobotrya Wardii</i>	Upper Burma
<i>Eriophyton Wallichianum</i>	Himalaya
<i>Gentiana coronata</i>	”
<i>filistyla</i>	W. China
<i>setulifolia</i>	Upper Burma
<i>Wardii</i>	”
<i>Hibbertia fascicularis</i>	Tasmania
<i>procumbens</i>	”
<i>Jaborosa Volkmannii</i>	Andes
<i>Lobelia Blanda</i>	Chili
<i>Lonicera cyanocarpa</i> , var.	
<i>porphyrantha</i>	Tibet
<i>Mahonia calamicaulis</i>	Upper Burma
<i>Meconopsis bella</i>	Himalaya
<i>Heurici</i>	W. China
<i>punicea</i>	”
<i>speciosa</i>	”
<i>Nierembergia intermedia</i>	Chili
<i>Onosma paniculata</i>	W. China
<i>Waddillii</i>	Tibet

APPENDIX II

Paraquilegia microphylla	W. China
Primula Agleniana,	
<i>var. atrocrocea</i>	Assam
<i>var. thearosa</i>	Upper Burma
Baileyana	Tibet
Cawdoriana	”
Dickieana	Himalaya
Littledalei	Tibet
pulvinata	W. China
rubra	Assam
silensis	W. China
Valenteniana	”
Prionotes cerinthoides	Tasmania
Ranculus semiverticillatis	Andes
Rhododendron Lochae	Australia
Sophora Moorcroftiana	Tibet
Thalictrum diffusiflorum	”
Trifolium reflexum	N. America
Verbena Coomberi	Andes
Viburnum Wardii	Assam; Burma
Wahlenbergia tuberosa	Juan Fernandez