

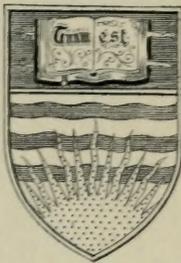
# THE VIOLET BOOK

A. & D. ALLEN-BROWN

MACMILLAN LIBRARY  
STORAGE ITEM

**LP1-B12C**

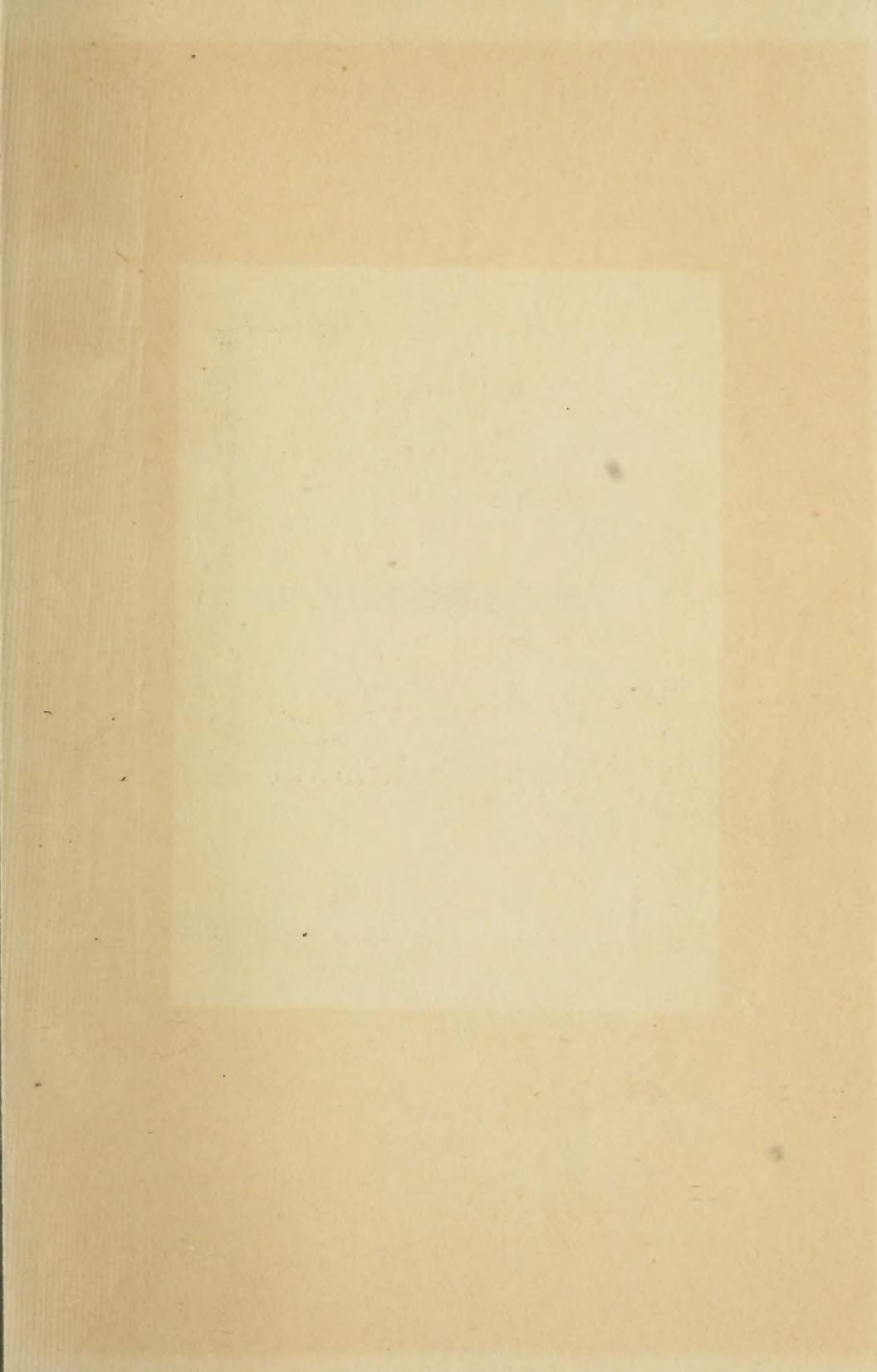
UBC LIBRARIES

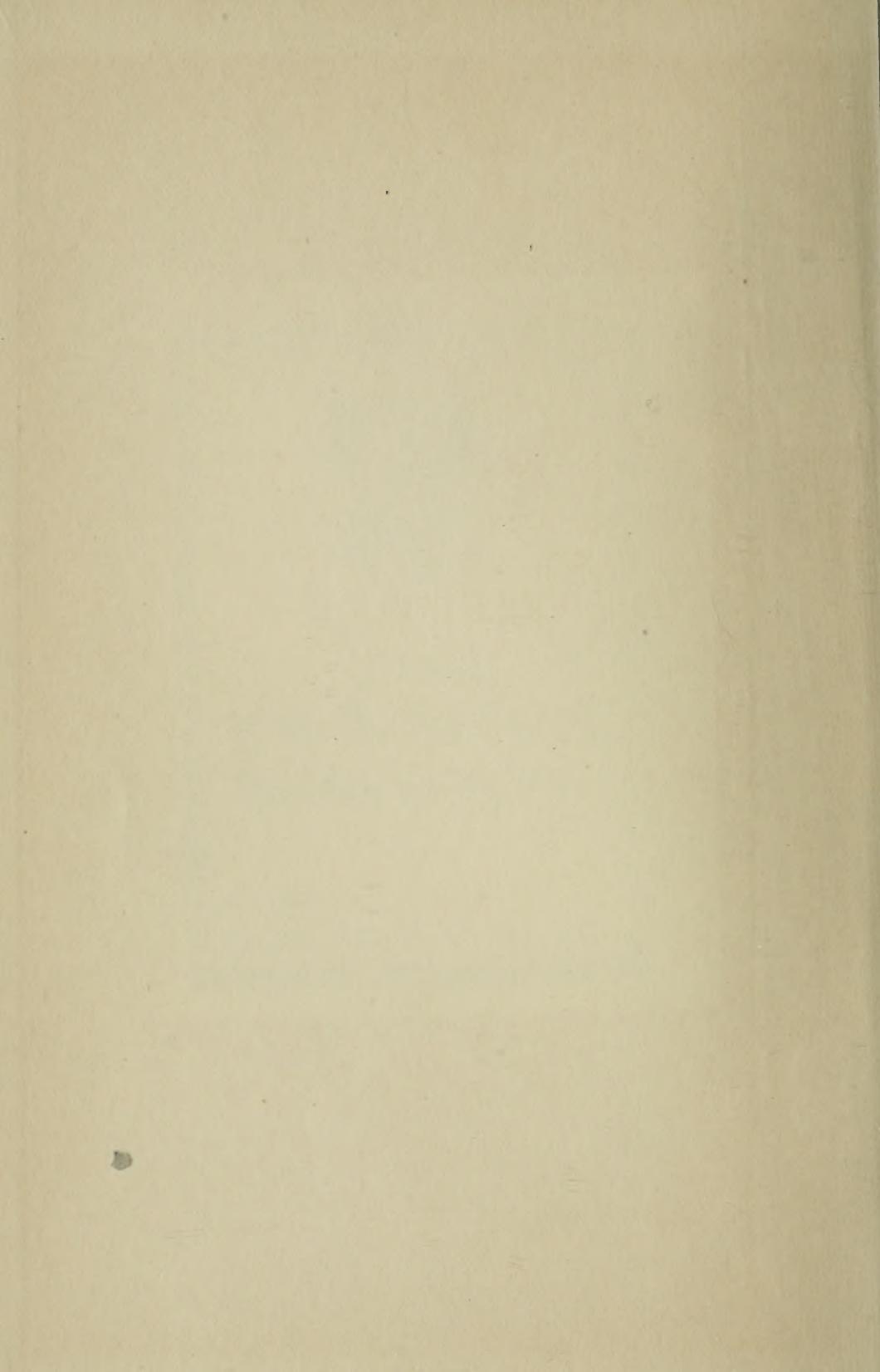


Library  
of the University of  
British Columbia

Accession No. 54246

Call No. SB 413 V8 A4





THE VIOLET BOOK

THE WOLF BOOK

A WOLF STORY

# THE VIOLET BOOK

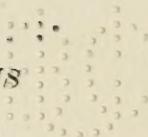
BY

A. and D. ALLEN-BROWN

*COLOURED ILLUSTRATIONS*

BY

IRENE M. JOHNS

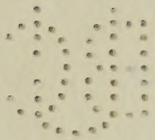


Taunton :

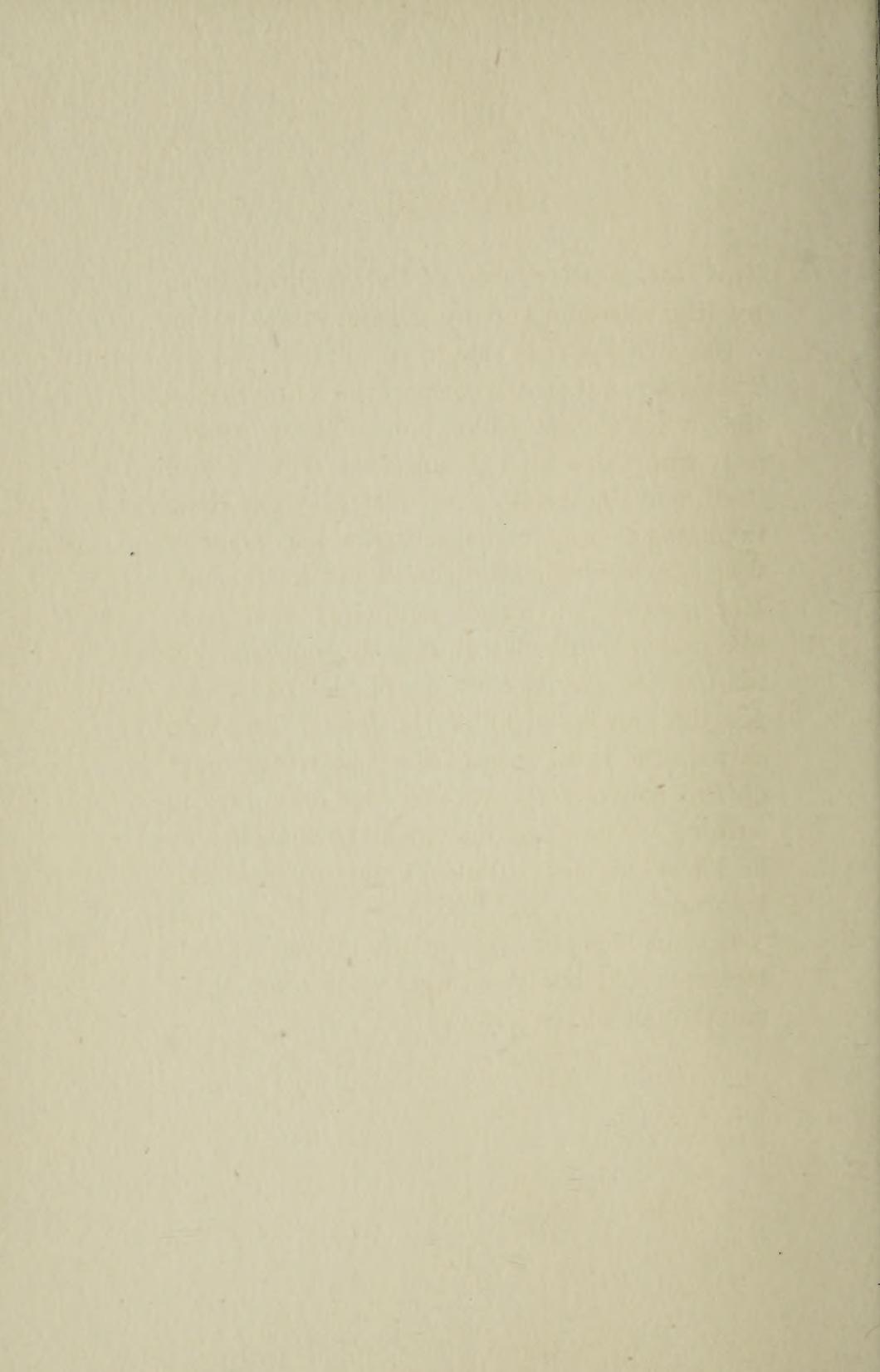
BARNICOTT & PEARCE

THE WESSEX PRESS

MCMXXII



TO OUR NEIGHBOUR  
MISS ELIZABETH ROBINS  
OF BACKSET FARM  
HENFIELD  
SUSSEX

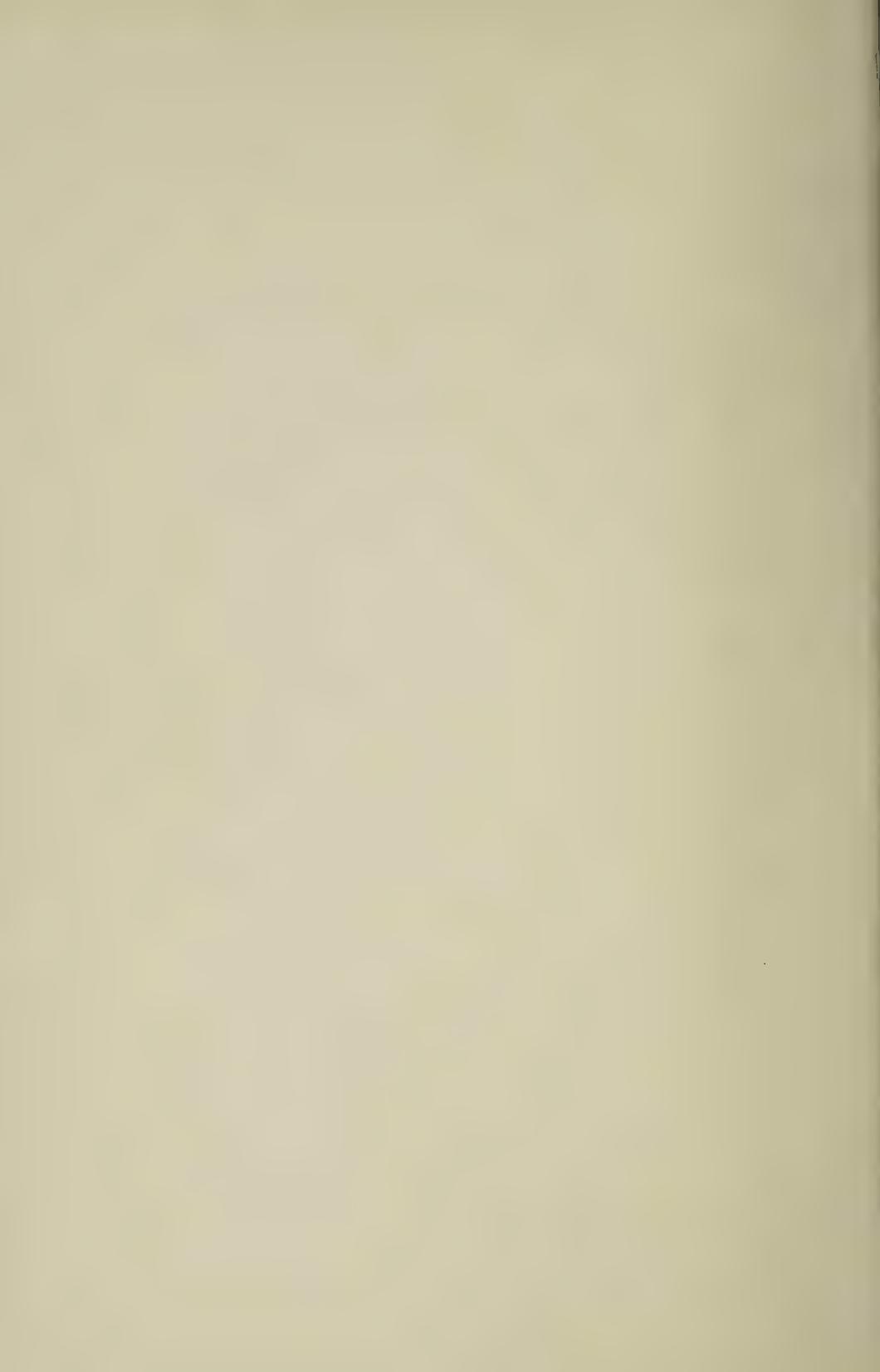


## PREFACE.

THE Rose is the Queen of the English garden by Right Divine and by general acclamation.

Other favourites stand near her throne. The clear-smiling carnation, the pure lily of the valley, the fairy-like, but ambitious sweet-pea, who casts an eye upon the very crown itself, and the violet; the violet who, like King Cophetua's beggar maid, wears her honours with a sweet remembrance of her lowly past. Her message is one of gentleness and love. She makes no display in courtly function, not for her the gay decoration of the ball-room, nor the glowing light of the feast. But who so welcome to the bed of the sick, to the hand of the convalescent, or on the desk of the writer? Who so at one with the mourner as he places his last tribute on the grave of the beloved?

Let us honour the gentle flower which blossoms and breathes sweet odours for eight months out of the twelve.



## CONTENTS.

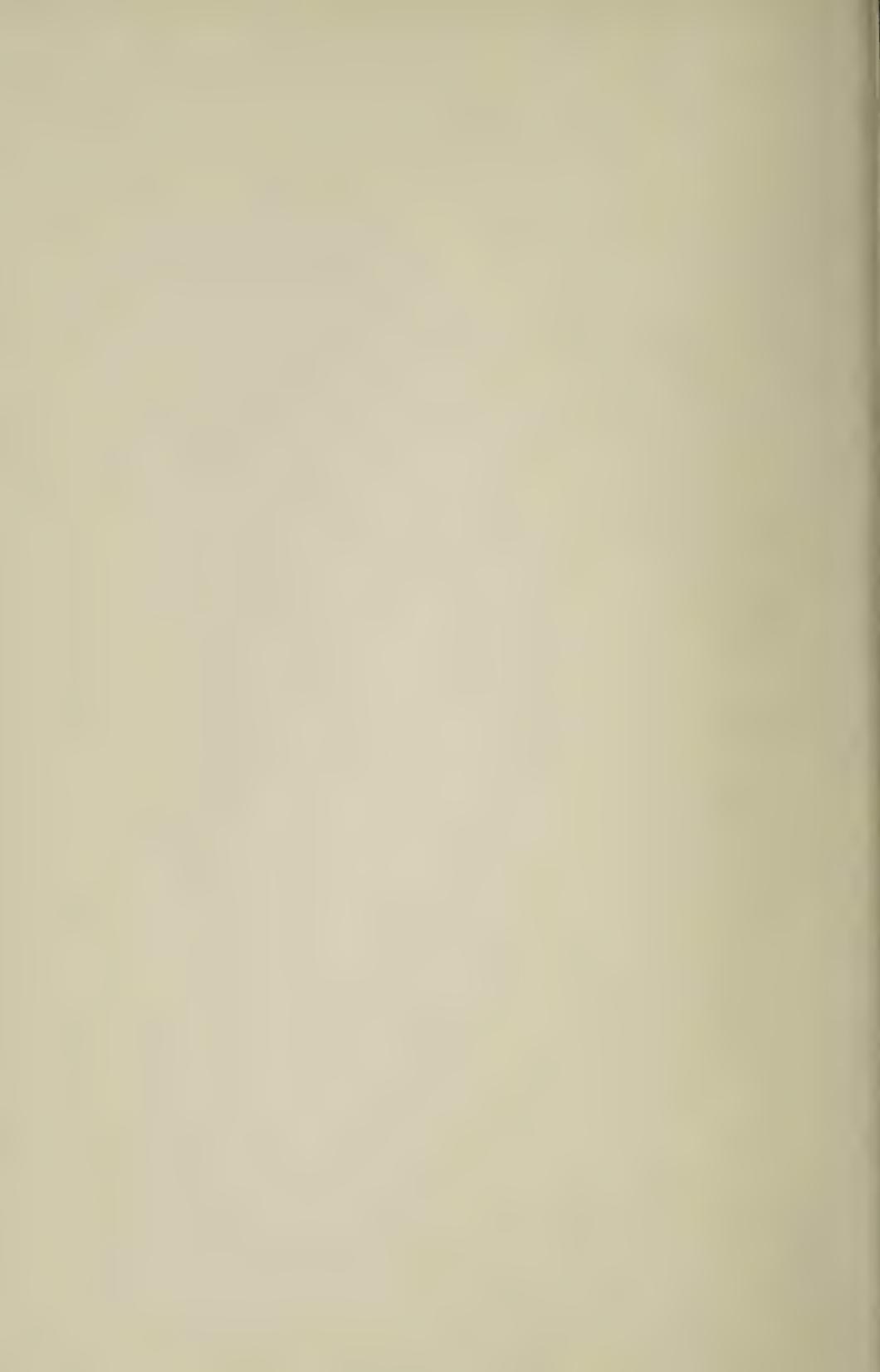
|  | PAGE |
|--|------|
| PREFACE.   |      |
| THE EARLY DAYS OF THE VIOLET .                     | 3    |
| GENERAL CONDITIONS FOR VIOLET<br>GROWING . . . . . | 9    |
| VIOLET CULTURE . . . . .                           | 19   |
| LIST OF VIOLETS . . . . .                          | 33   |
| HINTS ON PACKING . . . . .                         | 39   |
| SEED SOWING . . . . .                              | 42   |
| INJURIOUS INSECTS AND DISEASES .                   | 49   |
| EARLY BEGINNINGS . . . . .                         | 63   |
| EXPERIENCES . . . . .                              | 68   |
| CONTINUATION OF EXPERIENCES . .                    | 81   |

## ERRATA.

- On page 4 *for* "Dudome" *read* "Dodome."  
On page 8 *for* "Trejus" *read* "Frejus."  
On page 34 *for* "Raddenburg" *read* "Raddenbury."  
On page 36 *for* "Neolie" *read* "Noelie."  
On page 37 *for* "Sulphuria" *read* "Sulphurea."

## LIST OF COLOUR PLATES.

|                                   |                     |    |
|-----------------------------------|---------------------|----|
| PRINCESS OF WALES . . .           | <i>to face page</i> | 3  |
| LA FRANCE . . . . .               | „                   | 12 |
| BARONESS DE ROTHSCHILD . . . . .  | „                   | 20 |
| ASKANIA . . . . .                 | „                   | 31 |
| SOUVENIR DE JEAN JOSSE . . . . .  | „                   | 39 |
| JOHN RADDENBURY . . . . .         | „                   | 46 |
| MRS. J. J. ASTOR . . . . .        | „                   | 55 |
| MARIE LOUISE (IMPROVED) . . . . . | „                   | 64 |
| MRS. ARTHUR . . . . .             | „                   | 74 |
| DE PARME . . . . .                | „                   | 85 |



EARLY DAYS OF THE VIOLET.







Princess of Wales.

# THE VIOLET BOOK

## Early Days of the Violet.

“Violets dim  
But sweeter than the lids of Juno’s eyes  
Or Cytherea’s breath.”

SHAKESPEARE.

“Long as there are violets  
They will have a place in story.”

WORDSWORTH.

**F**OR the earliest mention of the violet we must turn to the mythic legend. It was said by the ancients that the Princess Io, a maid beloved of Jupiter, was changed by him for a time into the form of a cow to protect her from the anger of Juno. That she might find fitting food he caused the violet to spring up in the pastures.

Another legend has it that when Jupiter visited the country of Ionia a maiden presented him with a violet as the flower most beloved by her people. For this cause it was held in great esteem by the Athenians, who looked upon themselves as the descendants of the Asiatic Ionians.

According to Virgil, after the death of Daphnis thistles took the place of violets as the emblem of mourning in nature.

It was usual amongst the Greeks and Celts to decorate with violets the bier on which a dead maiden lay ; in many countries it is still the practice so to surround the coffin of young girls.

The Athenians also had a custom (by no means poetical when the reason was understood) of crowning themselves with violets during their protracted banquets, under the belief that the violet perfume prevented intoxication.

The Romans, who were good gardeners, differing in this respect from the Greeks, cultivated their gardens with much care, two of their favourite flowers being the rose and the violet ; these were often grown round beds of vegetables.

The younger Pliny, when describing the villa he built for himself near the shores of the Tuscan sea, says, " the gallery has a double row of windows on both sides . . . and one on each side towards the garden . . . Before the gallery lies a terrace perfumed with violets."

In 1564 the first mention of double violets is made by Rombert de Dudome. In that year he published a most interesting work,

written both in Latin and Greek, on the various fruits and flowers of the period, with their German, Flemish, Italian and French names. After describing the hardiness of the sweet violet of that time—how in spite of its delicate, fibrous root it can resist the summer's heat and the winter's cold; thriving under the shelter of walls and hedges, growing in fields and gardens, luxuriating in rich soil and flowering in March and April—he adds, "To this genus belongs the double violet of multiple petals, which are found in gardens only." He goes on to speak of the small, wild violet, paler and scentless, or almost so, which grows in shady places, by hedge and ditch, and in land generally dry and sterile. After which we are told of its medical efficacy:—

"The leaves and flowers can be used both as emollients and as a restorative."

"The flowers are employed for all sorts of internal inflammation."

"Dried violets are useful as a tonic."

"The leaves of violets taken as a salad make a good stomachic."

"The seeds of the violets will drive away scorpions."

"The leaves may be used as an outward application for inflammation of the eyes," etc.

In 1730, De la Quintinye, head of the Royal Gardens of Versailles, in a new edition of a

former work gives instructions regarding the growth and multiplication of both double and single violets.

We do not yet know how the double flower first came into being. Some of the old botanical books tell us that "they became double through cultivation"; this assertion is far from being accepted by the scientific growers of to-day. De la Quintinye himself says, "The double violet which is cultivated in the garden is the same as that which grows wild in the fields, only the latter is single and the former double."

According to M. Millet the Parma violets should be put into a category other than that of the ordinary double violet. He says, "The flower, leaves, perfume, *everything* goes to prove a birthplace other than Central Europe." What its origin is, whence it came, and even when it first appeared remains shrouded in mystery. This alone is certain, that the family of the Parma violets gives the sweetest perfume, that the flowering season is the longest and the foliage the handsomest of all double violets.

It is to French writers, past and present, that we turn for the fullest account of the sweet-scented violet. That the French should hold them in high esteem is only natural when one remembers the enormous commercial in-

terest attached to their growth and development for scent, for confection, as cut flowers and exported plants. The country round Toulouse, as well as the regions surrounding Nice and Cannes are those which supply most of the Parma violets that are grown for purposes of cut bloom. But violet farming for perfumery purposes is confined almost exclusively to the latter districts. In a triangular tract of country, of which the apex is Grasse and the base is the shores of the Mediterranean Sea from Cannes to Nice something like 150 tons of violets are harvested annually between mid-January and mid-April for the making of scent.

The plant is still used for medicinal purposes, flower, leaf and root. Chemically, too, it is useful. Dr. Brewer tells us that "Chemical test paper is steeped in syrup of violets and used to detect acids and alkalis. If an acid is present it will change the violet paper into red; an alkali will turn the paper green. Slips of white paper stained with the juice of violets (kept from the air) will serve the same purpose."

The connection of France with violets recalls the story of Napoleon Bonaparte's banishment to Elba. He told his friends that he would return with the violets, and after his departure "Corporal Violet" became a favourite

toast among his friends. Subsequently when he broke his parole and arrived at Trejus in the valley of the Var there were women assembled to sell violets ; and it was arranged as a secret sign that when anyone was asked : " Aimez-vous les violettes ? " if they answered " Oui " they were outside the cause, but if they answered " Eh bien " they were adherents.

Violets became the flowers of the Empire, and when in 1879 the friends of the Empress Eugenie visited her in England to express their sympathy over the death of her son, " the Prince Imperial," they wore violets as symbols of attachment to the Imperial family of France.

From Virgil onwards our flower has been beloved by the poets of every nation. And though no country now has the violet for her emblem, as the lilies of France or the rose of England, yet each one seems to lay a special claim upon it. It is a nestling amongst flowers.

" Je recois partout bon accueil,  
Mon parfum est de ceux qu'on aime  
En mon calice, on trouve même  
Une larme pour chaque deuil."

SONNET DE MME. GELADE.

## General Conditions for Violet Growing.

**B**EFORE undertaking the cultivation of violets it is well to consider what are the conditions that conduce to their highest development. Rather poor violets can be grown nearly anywhere by nearly anybody ; but good ones make certain stipulations, and we consider that their first one is that the grower should love them. We know no plants that respond so quickly to attention and love as violets ; they demand an instinctive knowledge of their needs. Lacking this many people have only moderate success and do not regard them as a sound financial undertaking.

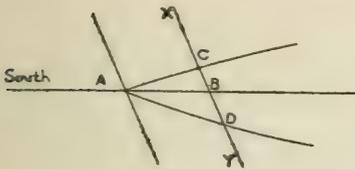
Their second requirement is pure air. Given that, they will stand scorching sun or pouring rain, bustling wind or winter frost. The smoky atmosphere of town life is abhorrent to them ; they will not grow in it.

The third essential is sunshine. Plenty of sun they must have if they are to be more

than the feebly flowering plants that can be seen in many old gardens dragging out a weak and leafy existence at the foot of some lofty shrub. Our English gardeners are apt to fear too great heat for the violet and to plant it for its summer quarters in a shady place. But while a partial shading in the height of the summer, such as would be given by rows of sweet peas running from north to south between the violet beds, is quite a good plan, we would join with M. Millet, the great French grower, in insisting on the efficacy of hot sun to ripen the crown of the plant. And always provided that the roots have plenty of moisture, a well ripened crown means many and fine flowers.

The chief objection to a position fully exposed to the sun at all times is that Red Spiders also like it: and of them we shall make mention in another chapter. But if we are to choose between too much sun and too much shade we should choose the former; while the use of an open northern slope for summer quarters has much to recommend it. For since the sun's rays are never vertical in this country a beam of sunlight striking a northern slope will be spread over a wider area than it would be over flat ground; while on a southern slope the beam will fall more directly and thus be more concentrated. The

diagram below taken from Sir A. D. Hall's valuable book *The Soil* will make this clear.



(The beam of sunlight represented by X, Y, is spread over an area represented by A, B, where the ground is flat; by A, C, where the ground slopes to the south; by A, D, where it slopes to the north).

In planting violets in their summer bed therefore, we should say put them in the open on a northern slope if possible ; or let them, still in the open, be where some temporary crop casts a flickering shade over them ; or allow them, like ours, the full glare of the summer sun on a southern slope and turn your attention to making things uncongenial to the Red Spiders.

Fourthly there arises the question of soil. In this matter violets are most accommodating. They will grow to perfection on a clay or a loam or a sandy soil, provided that suitable manure be given and diligent use be made of the spade and hoe so that the ground is kept clean and aerated. Undoubtedly, if asked, they would choose a good medium loam, but they do not stick out for that.

The subject of soils is an interesting one, and one to which we cannot possibly do justice here. To those interested we would recommend the book by Sir A. D. Hall to which we

have already referred and from which we shall quote, as a few general remarks may be useful.

For practical purposes there are three soils, namely, clay, loam and sand ; and technically these differ from each other simply in the size of the particles that make them up. The particles composing sand vary from one millimetre to a twenty-fifth of a millimetre in diameter ; those composing clay are less than one-five-hundredth of a millimetre, and loam covers the ground between them. But there is no such thing as pure sand or pure clay. Sand, which consists mainly of grains of quartz from the granite rocks of past geological ages contains something like 20 per cent of "clay," while clay, which comes chiefly from the weathering down of felspar in the granite rocks, contains about 20 per cent. of sand. Soil which we describe as loam contains from about 40 per cent. to 60 per cent. of sand, sandy loam has from 60 per cent. to 80 per cent. of sand in it, and clayey loam has only from 20 per cent. to 40 per cent.

Thus soil varies in texture from the fine grains that we call clay to the coarse ones called sand. And this matter of texture is one that must always be borne in mind by the practical gardener, for it is connected with every important operation in gardening ; with



La France.



manuring, with watering, with hoeing, as well as with the choice of crops.

Supposing that we hope to grow violets in a stiff clay, the first point to consider is drainage. A well-drained soil is necessary for several reasons. Soil must have air and it must have warmth if it is to be in a condition to support plant life. For the food of plants, Carbon, Oxygen, Hydrogen, Nitrogen and inorganic salts, comes partly from the air and partly from soil penetrated by air. For instance, the supplies of nitrogen in the soil are not available for the use of a plant until the bacteria in the ground have worked them up into nitrates. Certain of these beneficent little bacteria take in nitrogen from the air (unlike ourselves who though surrounded by an atmosphere that is three-quarters nitrogen cannot breathe in a bit of it!) and turn it into Ammonia, a compound of Nitrogen and Hydrogen; another set of bacteria, by the addition of the lime that they take into themselves, produce nitrite of lime, which yet others, uniting that with oxygen, turn into nitrate of lime, one of the most valuable of plant foods. But the bacteria cannot do their work without air, nor below a certain temperature (which has been found to be 41 F.) hence the importance of drainage. The depth to which a soil is drained is the depth to which it is

warmed and aired and made possible for bacteria to work in, and thus available for the roots of a plant. It is therefore easy to see that plants on a well-drained soil can stand a drought much better than those on water-logged land, because in the former case there is a deep root run and in the latter only a shallow top soil which soon dries out.

These remarks apply to all soil, but it is in the case of clay that the problem of drainage is the most acute.

After drainage the next important point to consider is how to lighten the texture of the soil. Drainage itself helps this, but not enough. The particles that make up a clay soil are too fine. They are so fine that clayey water stirred up will remain cloudy for days. Our object must be to make those particles flocculate, or clot together to form bigger particles. The addition to the soil of anything that aids this process and breaks up its fineness is useful, even apart from its value as manure.

But when we are trying to modify the texture of a soil we may as well also try to improve its quality. Hence what we add should have value as a plant food. Lime is especially useful on a clay soil.

Sir A. D. Hall says "Lime itself can be shown in the laboratory to have little floccu-

lating power . . . However, as soon as lime is applied to the soil it becomes converted into carbonate, and some of it will always be going into solution as bicarbonate, a salt which possesses great flocculating power. In practice, the application of such small quantities of lime as a ton or even half a ton to the acre have the greatest value in ameliorating the working of clay land ; not only does it move more readily and fall more easily into a good tilth, but by becoming coarser-grained it allows the rain to percolate more freely and thus dries earlier in the season, so that the limed land can often be worked several days before the unlimed land can be touched."

Natural manures such as horse and cow dung are also good. Of these horse should be used if possible on clay, as it is lighter, hotter and has more straw than cow manure. Green-manuring, *i.e.* the ploughing in of a quickly growing crop sown for the purpose, may also be resorted to to improve the texture of clay. In addition, such organic substances as fish or meat guano, dried blood, shoddy, waste animal material like rags, hair, clippings, horn, etc., can all be used to improve the tilth of the soil, though the manurial value of most of them is very "slow," *i.e.* it is long before they break down into the constituents of plant food.

But as regards artificial manures we would warn friends to be careful what they use, making sure that they have got exactly what is needed by the particular state of the clay or other soil before applying any, as damage may be unknowingly done. For instance, nitrate of soda, valuable as it is chemically, so spoils the texture of clay by causing the particles to deflocculate, thus making it fine and heavy again, that it may be better not to use it.

In preparing a clay soil, then, there are three things in particular to bear in mind. There must be good drainage so as to provide a deep root-run and to aerate and warm the soil. There must be a lightening of the heavy, close texture of clay by the addition of suitable substances: this is altering the physical character of the soil. And thirdly, the chemical character of the ground has to be modified by the adding of manure according to its own particular needs, of which it is safe to say that lime will be one.

These remarks as to manuring apply to the general preparation of a clay soil and have no special reference to the violet crop to be grown on the land. Reference will be made elsewhere to the particular food that violets like; though they are not really very fastidious.

Now suppose that the violet bed is to be made on a sandy soil. In this case it is necessary to reverse a good deal of what has been said with regard to clay.

The particles that compose sand are very coarse indeed, and water percolates through them very quickly. In other words a sandy soil both receives and gets rid of moisture at a great rate, and this tendency needs to be modified. Hence anything that helps to bind the soil together is good. For this purpose all sorts of humus, or decayed vegetable matter, can be used. Farmyard manure too is invaluable, cow dung being better in this case than horse, as it is cooler and heavier. Guano is also good. And very frequently it happens that where there is sand there is also marl not far off. If some of this marl (*i.e.* chalky clay) can be brought and mixed with the sand it is an excellent thing, since in making the soil heavier it helps it to retain its moisture.

Physically, then, sand needs to be made heavier in texture, and chemically it needs to be supplied with lime and with potash and with mineral salts: particularly with potash. And as to the lime, this needs constant renewing, as the rain is always washing down the calcium carbonate. By the addition of manure and humus a sandy soil gradually approximates to loam, just as clay by appro-

priate treatment should be made to do. From opposite ends of the scale these two soils by constant working gradually approach the gardener's ideal, a medium loam.

If it be one's good fortune to possess this at the outset, then with no extremes to combat the path is indeed an easy one. Beyond keeping the ground clean, replacing with farm-yard manure as much as a plant takes out of it, and giving it lime periodically to counteract the souring effects of regular manuring, there is little to be bothered about. The soil has not to be made, it is ready there, and will grow anything.

Violets will thrive in clay, and violets will thrive in sandy ground, but where you see chickweed and groundsel and fat-hen there they will more than thrive, they will flourish, for these are the signs of the best of all soils. Happy are we and all they who possess a good medium loam.

The remarks in this chapter may be summed up by saying that violets must have sympathy, a good atmosphere, an open position and a well drained soil that, if not loamy to start with, is, by judicious treatment, modifying its character in that direction. With these things assured it is safe to begin.

## Violet Culture.

**T**HE longer we grow violets the more we realise the all-importance of good stock. If you wish to have the best violet blooms never take any but the best cuttings from strong and vigorous plants. This applies to all violets, single, double, and Parma. The cuttings should be taken from April until the middle of May, but never later.

In the case of single violets select good outside cuttings with plenty of root from a healthy plant with a strong crown. Reject all that have a weedy appearance, as although they may survive the summer they will not give you the strong long-stemmed blooms of the cutting taken from a vigorous mother-plant.

When you have selected your cuttings go over them carefully and remove all runners and bad leaves ; tie them up in bundles of fifty or one hundred, and if they can be planted at once so much the better ; if not put them in the shade in a tub or zinc pan with a very little water at the bottom to keep them fresh

and vigorous. They must not, however, be left there many days or they lose their stocky character and become poor and weedy-looking. When planting always see that the rest of the cuttings are not exposed to the sun or wind ; cover them over with a cloth or put them under the shade of a tree or hedge, as it is fatal to plant a limp cutting.

The next thing is the soil. This should have been prepared during the winter, by digging in plenty of cow manure if the soil is sandy and horse manure if the soil is heavy, with any burnt stuff you may have, so that it may be ready for the spring-planting, as, if there are several thousand violets to be planted, it does not give very much time to get it all finished by the middle of May which is quite late enough.

The single violets should be planted  $14 \times 14$  inches apart or even  $16 \times 16$  inches if you have plenty of room,—we, as commercial growers, cannot afford more than the smaller space,—in beds not more than about 4 feet wide for convenience sake, with good 18-inch paths between.

If the soil is very light and sandy we draw drills so that any moisture may be retained in the dry weather. The violets are planted either with a dibble or a trowel, and one of the most important things is to see that the



Baroness de Rothschild.



roots go straight down into the hole made by the dibble and are not doubled up ; but above all, *plant firmly*, the welfare of the violet depends largely on this. Another very important point is to see that the crown of the violet rests on a level with the soil, neither above nor below, as either error is disastrous to its well-being. The beds before planting should be made firm either by treading or by the quicker method of passing a roller over the ground, as otherwise you would not be able to plant firmly. If the weather is very dry, we often are obliged to "puddle" the violets, which means watering all the drills before planting ; it is a great deal of trouble, but it is worth it, as it gives the violet a start in life.

The Parma violet, which is much more delicate than the single violet, may be propagated in many ways. The most general way is to divide the crowns in the spring when they have finished blooming. Select cuttings with white, clean-growing roots, covered with young feeding rootlets and root hairs, discarding any cuttings with hard, wiry roots, as the latter will not give you the abundance of bloom in the autumn and winter. Put several cuttings together, unlike the single violet, and plant them 9 × 9 inches apart in beds about 4 feet wide with a good 14-inch path between.

Another method of propagation consists in cutting off runners or offshoots from the mother-plant in February or March, again only those being chosen that show healthy, white roots. Directly you have taken all the cuttings you want, say several hundred, you throw them into a box with a lid to prevent their wilting and then proceed to trim them up. When this is done you place them two to three inches apart in boxes filled with a good mixture of soil and manure. The boxes should either be kept in cold frames or in the glass house and should have every attention, so that they are nice strong stuff for planting out in April.

A third method of propagation consists of taking cuttings between the middle of January and the middle of March. These cuttings in many cases have made aerial roots, but they should all be trimmed off. After this has been done the cuttings are put to root in sand exactly as carnations are. It is very important that the sand should be very clean with no decaying matter of any kind in it. River sand is the best to use. Make a point of never using the same twice over, as fresh sand gives the best results.

The sand should be put into boxes, well watered, and pressed gently with a brick to make it firm ; you then proceed to dibble the cuttings in, about one to two inches apart, with

a little bit of wood the size of a lead pencil. Keep the cuttings well watered—that is to say don't let them get dry,—and on very sunny days shade them with newspaper. Above all things do not allow them to wilt, as that means fewer flowers in the flowering season.

As soon as the cuttings are rooted, which will be in from four to eight weeks' time, they must be put into boxes of soil, or, if there is a vacant bed in the glass-house, they may be planted there until it is time to place them in the open.

We have now described the three methods of propagating the Parma violet and the grower will have to test each method and see where he gets the best results.

The planting out should be finished quite by the middle of May, or earlier if possible, as violets planted early stand a much better chance of surviving the heat of summer than those put in late. For a few weeks the cuttings should be left severely alone, even though the weeds grow apace and the ground looks neglected, as it is important that the rootlets near the surface should not be disturbed nor the hold of the young plants loosened in the ground.

When once the violets are firmly established the hoe should be kept going, all weeds

removed, and the soil kept clean and open. All runners should be carefully taken off, as they only drain the plant of the strength which should be thrown into the crown. In taking off the runners be very careful not to tweak the plant and so loosen it in the soil. Slip the hand under the runner and press downwards with the thumb so as to sever it at its junction with the parent plant.

If the weather is hot and dry the plants should be sprayed or hosed night and morning to keep the leaves fresh and green. But this is not always possible where thousands of plants are grown and the water supply is not unlimited. M. Millet, of whom mention has already been made, does not advise watering before the early part of July, even though the weather should be dry and hot; the reason being that the violets only really begin to grow in July. Up to this time the cuttings have been in a state of quiescence, simply holding their own. If once you begin watering, you must go on. Our experience is, that if the months of May and June are very dry we are obliged to water, otherwise in our sandy soil, the cuttings die.

The principal work through the summer is to hoe the ground, take off runners and keep the land clean, and by August, if the season has been favourable, the violets should have

grown into strong and sturdy round plants. August and September are nevertheless very critical months for the violet grower, as all sorts of things may happen, such as attacks of red-spider, and spot, also of surface-grubs and caterpillars, these latter devouring the leaves and ruining the look of the plant. But all these things may be avoided with care and attention.

In September we begin to think of lifting the Parma violets into their winter quarters, *viz.* into frames, as we, unlike the Americans, find that Parma violets do better in frames than in houses. A site facing south should be chosen, as the violets will want all the sun they can get in the winter. The frames we use are small and handy and not too heavy for one person to lift alone. Each frame has four lights 4ft. long and 3ft. wide. The frame should have had well-rotted manure, either cow or horse according to the nature of the soil, dug in and soot sprinkled on the top. The ground is then made firm by treading and large square holes are dug ready to receive the plants. Each light takes twenty plants, and the next thing is to select them. Be very particular about this and choose only the best, namely those with strong crowns and with plenty of promise of bloom. It is a waste of space to put in any but the best. The selected

plants must be lifted with a large ball of earth attached to their roots and then placed carefully in the holes awaiting them. If the soil is at all dry we fill the holes with water so that there is no risk of the roots being dry, which would give the plant a check. The violets must be planted *very firmly* and we find the only way to do it is to get a rammer and beat the soil round the plant until it does not move. Be careful not to get the plant too low in the hole, so that the crown is covered with soil, nor too high, so that the neck of the plant is exposed; but let it rest on a level with the soil and all will be well.

When the planting is finished, water the violets overhead with a can with a rose so as to cleanse the foliage thoroughly. As Parma violets are not nearly so hardy as single violets and feel the difference of temperature, we think it wise to put the lights on at once, giving plenty of air at night and still more during the day; in fact the lights, if there are not too many, may be taken off or pushed right down in the day time. A great many growers believe that the only way to get plenty of bloom is to plant the violets in the frames so near the glass that their leaves brush against it. We do not agree on this point, as the leaves are apt to get bruised, and the frost catches them unless the frames are covered with mats.

Before the frost becomes too severe it is wise to bank hot stable manure round the frames containing the Parma violets so as to set up a slight heat; this will prevent the frost from striking through the wood and will encourage bloom. In severe frost the frames must be covered with mats, Archangel or others. The French have a different plan. Early in October the paths on either side of the frames are dug out to a depth of from 12 to 18 inches and filled in with hot stable manure to a level with the top of the frames, the paths being not more than 18 inches wide. Every four weeks a "chauffage"—meaning the adding of new manure, takes place, thus the heat is kept up throughout the winter.

In October comes the lifting of the single violets into either frames or houses, or both. We find that it does not do to move the singles too early; they do better when they are lifted in full bloom and have had a touch of frost. A low type of house is best for the violet, and if during the summer it has been used for some other crop it must be thoroughly cleaned, the glass and wood-work washed with carbolic soap and the brickwork whitewashed. Plenty of good, well-rotted manure must be dug into the soil and a good dressing of soot sprinkled on the top. The violets are then planted in the ground, not on benches. The

house should be carefully measured out, the plants being planted 14 × 14 inches apart with 16-inch paths, so as to give a little room for treading when the violets are picked. Our method is to put down the line and let one man go along digging large square holes ready for the violets. Again if the soil is at all dry we team water into the holes, as we know how important it is that the roots should not be dry. The best plants are again selected and lifted with an enormous ball of soil and placed in the holes prepared for them, and made firm by a rammer. The plants must be carefully cleaned before lifting, all eaten and decayed leaves must be removed, as well as every runner and cutting. These latter are very valuable and should be carefully heeled in until the rush of planting is over and we have time to turn our attention to them.

When the planting of the house is done, we water the whole with a hose with a fine rose to clean the foliage. Great care should be taken when planting not to break the leaves or mess the plant, and above everything else make it firm. We used to think it necessary to keep the house closed for several days after planting, but now we know better and give ventilation as usual; the plants receive no check and we pick uninterruptedly from them.

Violets in frames are planted in exactly the

same way as in the houses and as they are essentially hardy plants, the lights on single violets should not be brought into use until frost appears. Where many violets are grown it saves an enormous amount of time and labour to frame the plants where they stand ; provided suitable arrangement has been made beforehand, namely that the beds face south and are in a position as sheltered as possible from cold north winds. Our experience is that long partitionless frames made out of boards one and a quarter inches in thickness, held firmly together by cross-bars are the healthiest for violets, as the free circulation of air diminishes the danger of damping.

Violets must not be forced, the temperature in the house should never exceed 50 Fahrenheit. In sunny weather the temperature will naturally rise, but try not to let it be more than 60 F. Give all the air you can and let the pipes cool down. In warm weather it is well to water the pipes. This is to prevent Red Spider.

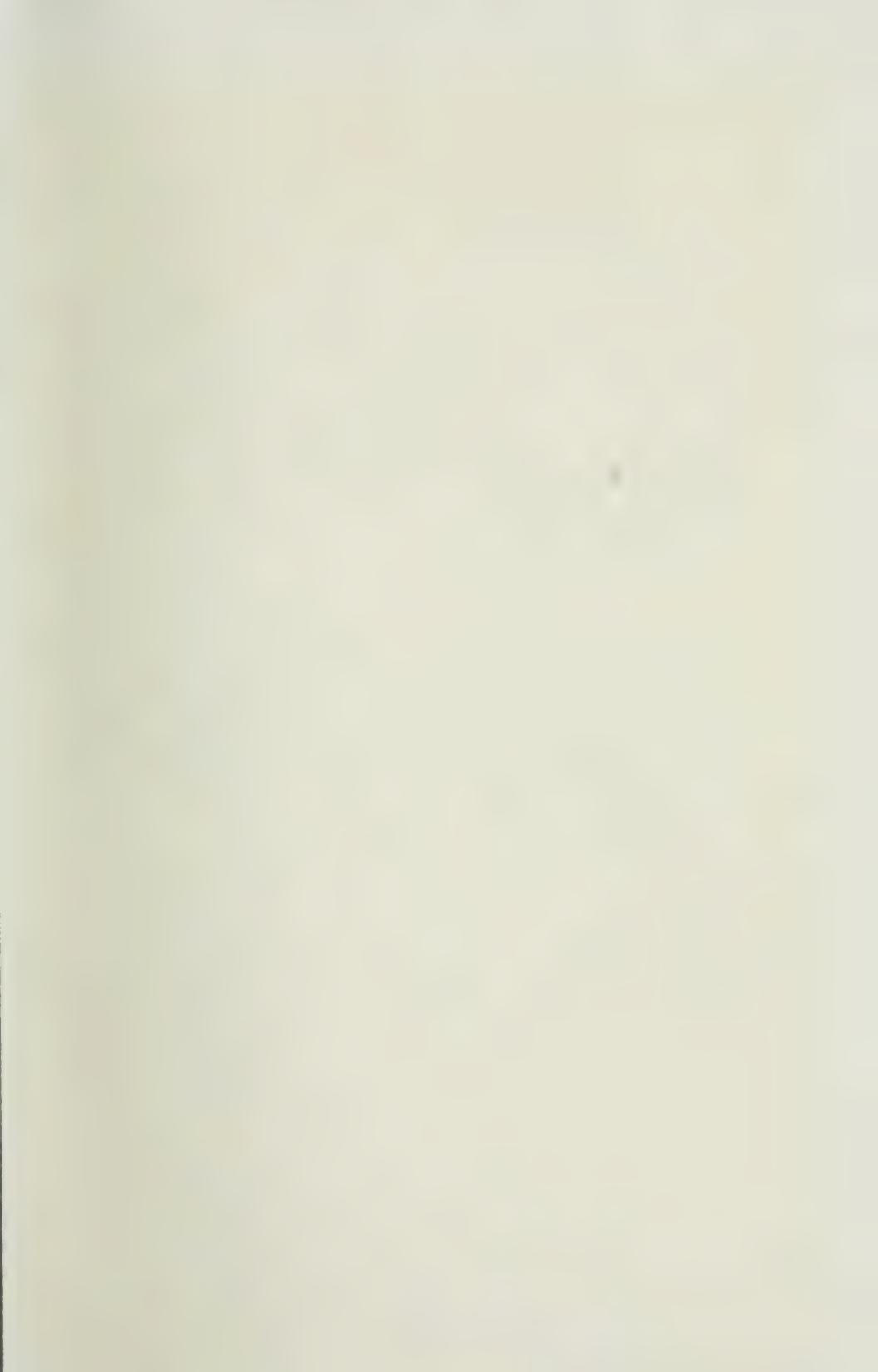
The great advantage of having violets in houses is that they bloom all through the winter. Owing to the slight heat that it is possible to give them, combined with plenty of air, they are growing under ideal conditions.

Out-of-doors violets bloom freely during the months of September, October and November,

but towards the latter part of December and throughout January when the weather is often dull and sunless they are practically dormant.

In February all the violets, indoors and out, begin to bloom more freely and continue to do so until the middle and sometimes the end of April.

When all the plants have been lifted into their winter quarters, the serious work of caring for them begins. The houses and frames should if possible be gone over every week, any runners being removed and all yellow and dead leaves being cut off. Do not throw these decayed leaves on to the ground, but throw them into a basket as it is impossible to clear up all the bits, however good one's intentions, and this decaying matter is apt to produce disease. The soil should from time to time be forked over lightly so as to keep the ground sweet. The plants must be watered when they need it; there is no hard and fast rule. We always water them overhead with a rose and find that the violets enjoy it, but we are careful to do it early in the day, so that the leaves have time to dry before the house is shut up for the night. The frames will not want much watering during the winter, but when they do need it a sunny day must be chosen when plenty of air can be given, or the lights even taken off. We find that a weak





Askania.

solution of either cow or chicken manure or soot-water given to the roots of the violets every fortnight does them a lot of good.

Ventilation has been briefly mentioned, but we should like to reiterate that the violet is a hardy plant and must be kept cool. It is impossible to give any rules about ventilation, but in our English climate there is never a day when some air should not be given. When ventilating in the morning do not give all the air at once, but little by little as the temperature gets warmer and the plants require it. In the spring, when the days are lengthening and the weather is warm you cannot give too much air, as it prevents the blooms getting pale and small, and also prolongs the season.

We must not forget to mention that violets do very well under cloches, these are propped up by pegs and can be left open night and day.

The violets that are left in the open will bloom until late in the autumn and very early in the spring if the weather is fairly mild, but one must not expect much of them through a hard winter. Provided the soil is well-drained, frost does not kill the plants and in the spring one is able to pick quantities of outside violets, naturally not as fine as those grown under glass, but a beautiful colour and very sweet.

In the autumn, when the planting is over we can turn our attention to the cuttings taken off the plants that were lifted into the houses or frames. These are called autumn-struck cuttings and are very valuable. They can be planted any time during the winter if the weather is mild, but the earlier the better. By the time spring comes they should be well established plants bearing fine blooms. Autumn-struck cuttings are able to stand a trying summer better than cuttings planted in the spring, and this is where their special value lies.

## List of Violets.

**T**HE following list of violets comprises only a few of the existing varieties. The violets to which new names have been given are legion. Very often we consider that the claim to being a new variety rests on grounds too slender to be recognised by any scientific method of classification. The smallest break in the routine of its growth will be seized upon by the excited grower as evidence that a new flower has arisen. And thus we get two or three names, as has happened so much with sweet peas, for what is really the same flower.

Our aim in the following list has been to mention only those whose individual characteristics are well-marked (with the exception of La France, which we do not consider very different from Princess of Wales) and, of those, only the varieties most worth growing. As better kinds arise, some that once were favourites are superseded. The Blue Czar, for instance, is scarcely worth growing since the advent of the Princess of Wales ; and in

much the same way Perle Rose has been put into the shade by Cœur d'Alsace.

A few notes on some of the varieties may be found useful.

While all violets like a fairly good soil, and quickly deteriorate if it gets impoverished or dries out, some are more particular in this respect than others. The Baroness de Rothschild likes a distinctly rich soil.

Souvenir de Jean Josse requires care. It must not be kept too dry and it gives the best results in frames.

The tendency of White Czar is to make too much leaf, therefore its soil should not be over rich.

Leaf-mould is seldom advisable for the singles, but for the Parmas it is invaluable, especially oak leaf-mould.

All Parma violets must be kept thoroughly wet throughout the summer when they are in the open.

Admiral Avellan does not do its best out of doors. The colour improves marvellously under glass.

Semper florens and Sulphurea are essentially outdoor varieties. The former should bloom profusely in August if its roots get enough moisture. Both are excellent for borders.

John Raddenburg is not worth forcing, but

it is a beautiful pale blue, and charming in the spring.

Princess of Wales is the best all-round violet there is. It is very hardy, and while it does splendidly in houses and frames, it also stands well a considerable amount of frost.

We mark with an asterisk those varieties which appear to us to be the most satisfactory for the ordinary grower.

### SINGLE VIOLETS.

#### \*PRINCESS OF WALES.

Large dark blue flowers with long stalks. One of the largest and best ; splendid for forcing.

#### LA FRANCE.

Fine large variety.

#### \*ASKANIA.

Large dark purple flower, less square than Princess of Wales, free bloomer, very fragrant.

#### \*BARONESS DE ROTHSCHILD.

Enormous purple violet, free bloomer, likes rich soil.

#### \*MRS. LLOYD GEORGE (new).

Large dark violet with rosette in the middle, very prolific.

## LUXONNE.

Purple-blue, very sweet and early.

## CZAR.

Hardy, fragrant, free-flowering, blooms smaller than Princess of Wales.

## ADMIRAL AVELLAN.

Red blooms, hardy, good colour under glass.

## \*SOUVENIR DE JEAN JOSSE.

Reddish-mauve with white eye, very prolific.

## \*CŒUR D'ALSACE (new).

Rose-red violet, very fragrant, flowers not very big, blooms all the winter, forces well.

## NEOLIE.

Reddish-purple small flowers.

## \*WHITE CZAR.

The best white there is, small flowers, but very pure white.

## VICTORIA REGINA.

Very hardy, small flowers, prolific.

## \*SEMPERFLORENS.

Small compact plant, very fragrant, small flowers, bloom for nine months.

JOHN RADDENBURY.

Pale blue with white eye, very prolific  
in spring.

SULPHURIA.

Pale sulphur yellow, beautiful in mass.  
etc., etc.

---

PARMA VIOLETS.

\*MARIE LOUISE.

Large deep blue-purple flower with a  
splash of red, very prolific, forces well.

MRS. ARTHUR.

Dark blue, white centre, one of the best.

\*NEAPOLITAN.

Lavendar, very prolific, flowers borne  
on strong straight stems.

MRS. D'ARCY.

Very pale grey-blue, large blooms, quite  
the best of its type, not very free.

\*MRS. J. J. ASTOR.

Rosy heliotrope, large blooms, very  
prolific.

\*COMTE DE BRAZZA (Swanley White).

The best double white.

JIMMY HIGGINS.

Pale—not very prolific.

J. J. KETTLE.

Very pale mauve in colour—not free.

\*LADY HUME CAMPBELL.

Mauve, compact and vigorous, long stems, flowers freely.

MADAME MILLET.

Pink, forces well.

---

### DOUBLE VIOLETS.

BELLE DE CHATENAY.

Late flowering white.

BERTHA BARRON.

Dark violet.

KING OF VIOLETS.

Dark blue, very double.

DOUBLE WHITE.

Half double, pure white.





Souvenir de Jean Josse.

## Hints on Packing.

**T**O those who intend to take up the culture of violets as a trade we should like to offer the following suggestions :—

Never send away blooms immediately after gathering, but let their stalks be immersed in water for at least two hours.

To obtain the best prices, only the best flowers must be sent out.

Especial care must be taken with the gathering of violets in springtime, when the sun's rays increase in power daily. They should be picked in the early morning and kept in a cool place.

Send out no marked or withered blooms, even when flowers are very scarce.

Never allow cut violets to soak over head.

Violets sent by post must be carefully and firmly packed to prevent all shaking.

They should always be bunched, unless the contrary is especially desired, as they carry so much better.

Never lay one bunch upon another.

We think it is through a certain amount of careless packing that many people believe that violets do not carry well by post. If gathered in the cool, and properly packed, they should arrive perfectly fresh. We posted violets to Norway and heard that they arrived in good condition in spite of the long sea journey.

Now for a word relating to that most important point of the business, namely the packing of plants which are to be dispatched by rail or post in the autumn.

The plant must be lifted with a spade, taking care that a certain amount of soil adheres to the roots. If the roots are long, double them back and surround them with well picked damp moss. Roll the whole neatly in paper, so that the leaves are protected, and tie firmly round the centre with raffia. Write the name and number of plants on a small wooden label thrust through the raffia.

The spring cuttings are packed in the same manner, with this difference, that it is customary to put twelve cuttings into each roll.

The difference between opening a box of carefully packed violet plants, each wrapped in a neat roll of clean paper with its shining, unbroken leaves just visible, perfectly ready, when the cool moss is removed, to be put into the ground, and gazing upon a mass of sodden

or dried earth, soiled paper, torn leaves, and plants crushed out of all shape may be imagined. We speak from experience.

After some years' knowledge of English and foreign packing of violet plants, we think on the whole that the palm lies with the former, as regards both the quality of goods sent and the manner of packing. We speak only of the best firms here and abroad.

It is the old tale : bad English is very bad, but her best cannot be beaten.

## Seed Sowing.

**A**S yet we have said nothing about the violet from the botanist's point of view, nor made mention of seed-sowing as a way of multiplying the single varieties; but a book on the cultivation of violets must not ignore these things.

Botanically the violet belongs to the genus *Viola*, of which there are between one and two hundred known species. These species are widely distributed, being found practically all over the world. And so many of them were originally discovered in mountainous districts that they may be claimed as essentially Alpine plants. *V. Odorata*, the scented violet, is not quite so widely distributed, but even so it is found in every continent.

We do not propose to give here a list of the hundred or so known species of the genus *Viola*, of which it is considered by some botanists that seven species and several subspecies are indigenous to Great Britain. Our concern is with *V. Odorata*. The rest, beautiful, rare, brilliant as some of these may be,

and destined, possibly, to be the progenitors of children more wonderful even than Sutton's latest pansies, we leave to the care and championship of others.

Botanically, then, *V. Odorata*, of the Natural Order *Violaceae*, may be described thus:— Calyx persistent, inferior; of five oblong, acute, equal erect, permanent leaves produced at the base. Corolla irregular; five spreading, unequal petals, the lowest (which by the bending over of the tip of the stalk appears to be the upper petal) being elongated into a spur at the base. Five stamens, filaments very small; anthers broad, close together, obtuse, each with a membranous point. Germen superior, roundish. Style one. Stigma thread-shaped, extending beyond the anthers, pointed. One-celled, three-valved capsule bearing many seeds. Leaves cordate, deeply lobed, stipulate, finely serrate. Peduncle bearing bracts. Root stock short. Off-shoots free and creeping. Flowers, principally deep purple, but shading to pale blue, clear red and white. Very fragrant.

So much for that.

*V. Odorata* has claimed from us so many years of thought and care that we think we may add to the botanical description the following characteristics:—firm, but obliging; scent variable, quite strong some days and at

other times nearly imperceptible ; responsive to kindness ; discriminating in living longer for some people than for others ; quiet, but never depressing ; whimsical, very.

Violets *are* whimsical things. And while you can speak fairly confidently of your own children's doings it is rash to claim to relate correctly the doings of somebody else's. Therefore, we say what we know. And if someone knows differently then knowledge will be increased.

Violets may in a sense be said never to cease blooming. That is to say, there is never a time in the summer when if you look carefully over a large number of plants you will fail to find one or two apologies for a flower. There is generally a corolla, but often the petals are almost left out. We are speaking of the summer "flowers." In July, they increase in number and the petals show up more. These which come before the plant begins to flower properly, and the very deteriorated blooms that come after the spring flowering, are the best seed-blooms in the violet's life. Some people say that only these almost petal-less flowers produce seeds that are fertile. We do not say that. For seeds take two months to mature, therefore those found late in November, as well as those found in April, must have been formed when the plant was giving really

fine blooms. But of these seeds we admit there are not many, except from the commonest varieties.

From the middle of September till early November is the best time for seed collecting. And it can also be done in the late spring. Naturally different varieties mature their seed at slightly different times. And some, for instance, White Czar, Semper florens, John Raddenbury, give seed so freely that it does not matter much about knowing the exact time to look for it: there is no exact time.

But the larger and more beautiful varieties such as Princess of Wales, Baroness de Rothschild, Askania, etc., are all of them very tiresome about seed. It is not that they do not produce it. They do. But they fail to get it matured. They produce capsules that seem fat and hard, but which when opened are found to contain either unfertilised or not fully matured seed, or just one, or possibly two, that have come to perfection. Often a seed which seems large and hard and good, with a shiny husk, will be found when cut in half to be an empty shell.

And then when the precious seeds have been collected and sown they very often do not come up. A single failure in the management of the moisture of the soil may be enough to account for this. The soil must not be allowed

suddenly to dry out. Nor must the seed lie in the damp till 'it rots. Nor must it be kept too long before sowing.

Perhaps this sounds discouraging. But the point to be made is this, that in raising any but the commonest varieties of violet from seed a great deal of trouble must be taken for a quite small result. First watch the capsules carefully, and take the seeds just before they burst, if mice have not previously eaten them. They, too, like seeds just at the bursting point. Then, if it be spring, sow them in the ordinary way but take special care to keep them from mice, maintain an even moisture and keep them dark, or anyhow shaded. Then wait.

Or if it be seed collected in the autumn, sow it at once ; but at that time of year it might be well to follow the practice of M. Millet. Sow them in a box embedded in the soil, cover the box with a piece of damp cloth, leave it like that and wait.

You may have to wait many months : we have waited years, and then they have come. But with good fortune, and particularly of course in the case of the common varieties, the seed may germinate quite soon. Then beware of over-watering. When the young plants have made their first pair of leaves they should be pricked out into a carefully pre-



John Raddenbury.



pared bed of good ordinary loam, and sheltered from too great heat as well as from cold winds. Later on, while still small, they may be planted out to bloom in their permanent quarters.

It is perhaps hardly necessary to say that the Parma varieties of violet make no seed. In their anxiety to become more attractive to insects they have increased and beautified their petals at the expense of their reproductive organs, and so frustrated their own efforts. As to the double violet (a double flower with leaves like the single ones), so little grown now by anyone, it makes seed, but propagation by cuttings is the best plan. Some of the flowers are very beautiful, but their shorter season for blooming makes them hardly worth growing.

Seed-sowing is not a simple way of increasing and renewing one's stock. And there is the further difficulty that a proportion of the seedlings will probably be found to have reverted to a simpler type. But we do not wish to discourage it too much, for it is always possible that some new variety may be the outcome.

Of recent years a considerable amount of success has been achieved in the matter of cross-fertilisation for the purpose of obtaining a new variety, considerable, that is, in the case

of the violet where the technical difficulties are particularly great. We believe we are correct in saying that nearly all the very beautiful varieties, such as the Princess of Wales, have appeared at their own sweet will, not by the cleverness of man. Also, as is the case with so many other flowers, the same new variety of violet has appeared about the same time in widely separated localities and even in different countries; just as a new thought will come simultaneously to people far from each other in place and circumstances. Was not the germ of the evolutionary idea lying quiet in the minds of both Charles Darwin and Alfred Russel Wallace, only Darwin wrote it down first ?

Probably somebody else is thinking our newest thought.

## Injurious Insects and Diseases.

**W**E do not propose to discuss every insect and every disease through which a violet can possibly be harmed, for the reason that we are convinced by observation that foreboding and knowledge of ill creates ill.

“The thing which I greatly feared is come upon me.”

Whereas common sense, cheerfulness and a refusal to be discouraged have in practice more value than all insecticides. We ourselves have never made a study of diseases, and we do not recommend others to do so, although to some people this will seem hopelessly “unscientific.” We believe otherwise. Hence the insects and diseases mentioned will be simply the few common ones which by constant mental association with the violet have become part of its entourage, so to speak.

Of insects, then, we shall mention the

following :—Red Spiders, Aphis, Slugs, Snails and Caterpillars, Surface grubs, Leather-jackets, Wireworms and Millipedes : and of diseases, American spot and Mildew.

Red Spiders, of the family Tetranychidae, look a good deal like Cayenne pepper ; that is the colour of most of them except when quite young, but only the smallest grains are comparable to them in size. About thirty of them could stand on an ordinary pin's head. They are only just visible to the unaided eye.

We know no better description of them than that given in No. 41 of the Board of Agriculture and Fisheries' leaflets, which is as follows :—

“The comparatively large eggs are pellucid white at first and finally become slightly dark-coloured. They are globular, and are placed in the space between the ribs of the leaves. A close inspection with a microscope will show that they are kept in this position by means of firm threads stretched from side to side. A female Tetranychus may lay more than a hundred eggs, and by a week and a half the larvae from these may be adult.

The mites emerge from the eggs in five or six days and at once begin to seek the juices of the leaves. At first they are pale

greenish yellow in colour, with dark patches on both sides of the body ; they become more tinged with yellowish red later, and some very light specimens have been found, whereas in other cases they are seen to be of a distinctly red colour. Red Spiders in different stages of development may be found at the same time.

In the earlier stages of their existence the mites have only three pairs of legs, but when full grown they have four pairs. The head is provided with a stout pair of mandibles with hooked ends for biting into the tissues of the leaf, and the mouth has a sucking apparatus which is inserted into the tissues. On the under side of the mite, towards the end of the abdomen, there is a conical nipple, from which the threads of the web are drawn out, and guided by the motions of the mite and by the action of the minute claws and hairs of the legs.

A badly infested leaf has its underside completely covered with a dense web of fine silk, in which eggs are found in abundance, as well as number of mites of all sizes sucking up the juices of the leaf. The leaf becomes yellow and mottled, and, as a rule, finally falls off, when the mites escape on to the earth."

And on the earth, hiding under the clods, these mites remain until the warm weather of the following year when they climb up on the leaves of the violets and lay the eggs of a new generation. Therefore the best way to prevent attacks is to free the soil from them. This can be done most effectively by trenching the soil deeply. It is also a good thing to water it in the early spring with one of the many patent liquid preparations that are disliked by Red Spiders; or to give the soil (previously well worked) a thick dressing of soot, raking it in thoroughly. We believe that drenching the soil before and after digging with water to which a little common salt has been added, say in the proportion of an ounce to a gallon of water, is also helpful. We ourselves like deep trenching, followed by the application of soot: this of course can only be done when the ground is empty.

When the warm spring weather comes, it is as well not to wait for signs of Red Spider, but to take the offensive by watering the cuttings and the ground with one of the approved insecticides.

Spraying is usually recommended for Red Spider, but when an attack is actually in progress we doubt the efficacy of all spraying. It is difficult to get a sufficient force of water on to the under side of the leaves to dislodge

the spiders, which it is absolutely necessary to do. We believe the only thing in the case of a really bad attack is to pick off and at once burn the worst infested leaves, and to wash, individually, with a sponge and carbolic soap and water the under sides of the remaining foliage. This sounds laborious, and it is. But it is often effective. The soapy water need not be rinsed off the plants. Then having done this the ground should be kept damp for the sake of surrounding the plants with a cool atmosphere ; for it is heat more than dryness that causes red spider to multiply. Needless to say, the promotion of free growth, is the greatest defence against the danger of Red Spider, as the plant then quickly provides itself with new leaves with which to breathe. It must not be allowed to become dry at the root.

When the attack occurs in a house of violets, (where an attack never need be if the hot-water pipes are kept well watered), we recommend the same treatment. Keeping up a moist atmosphere will not check the spread of Red Spider, except in so far as it reduces the heat. They will sometimes give a great deal of trouble, once they have started, through a wet summer. We have it on the authority of Mr. Montagu Allwood that Red Spiders can live after being for twenty-four

in water. He also says that fumigating in the case of attacks in houses is useless, as they do not mind not breathing for twelve hours. But when a house is entirely empty of plants sulphur can be used, and this will destroy them.

### *Aphis.*

Occasionally green-fly causes a little trouble in a house, but this can always be overcome by fumigating the house with  $\text{XLall}$ . It should be done over-night, when there is not much wind. In the morning the *Aphis* will all be destroyed. Should green-fly appear out of doors it can easily be got rid of by the use of practically any of the advertised remedies. *Aphis* therefore never need cause serious trouble. But a few facts about these little insects may be found of interest in themselves.

There are four forms in which *Aphis* appears. In the spring all the flies are wingless and viviparous, that is, they lay no eggs but produce their young complete, hence these are all females. Aphids reproduce themselves very rapidly. A single one can produce seven a day in warm weather. These young ones struggle about on the backs of their parents until they find a good place on a plant; then they stick their mouths into it and suck the juice until they grow and burst their skins,





Mrs. J. J. Astor.

which they do two or three times a day. In seven or eight days they are full grown.

In the summer a new, winged, viviparous female arises and flies off to a fresh feeding-ground. Late in the autumn two more forms arise, a few winged males, and some oviparous wingless females. These latter are very difficult to kill. Until the insect has laid her eggs she can stand almost any injury, including, we believe, immersion in chloroform and decapitation. But when once the eggs are laid she dies in any case. These eggs remain dormant until the following summer, when they hatch and so give rise to a new succession of generations.

The greatest foes of Aphids are Ladybirds and Earwigs. Ladybirds eat nothing else. They lay their eggs on plants infested with green-fly, and both as larvæ and in the adult stage they eat them. Earwigs also like eating Aphids, on account of their honey-dew, *i.e.* the sweet, sticky substance they make by sucking the cell-sap of plants. But ants protect the green-flies, in fact they may be said to "keep" them, much as we keep cows, taking great care of their eggs in the winter and bringing them up in the spring, and putting them on suitable foodstuffs. Therefore war on Aphids should include war on Ants.

*Slugs, Snails and Caterpillars.*

These need no description. The large slugs devour in a very wholesale manner, but they are more easily traced and destroyed than the small ones who hide in every possible place, and make up by numbers what they lack in size. Repeated dressings of salt, soot or lime act as deterrents, but hand-picking and immediate slaughter are the best remedies, and the best time to find them is before 9.30 a.m. Greenwich time. Let violet growers encourage birds to nest in their gardens. The amount of injurious grubs and insects which they destroy while feeding their young is amazing.

*Surface Grubs (Agrotis Segetum).*

Surface Grubs begin to be troublesome in July and August. They live just under the surface of the soil and pull the leaves down into it and eat them. They eat at night. Hand-picking in the early morning is the most effective way of getting rid of them. They have to be searched for in the soil to a depth of two or three inches round the eaten plant. It is fairly easy to find them although they are much the same colour as the soil. Constant hoeing does more than anything to prevent the increase of them and of other objectionable insects. Not only are many of the pupæ crushed thereby but others are turned up to

the light and are observed and eaten by birds, particularly by starlings.

*Leather-jackets* (*Tipula oleracea* and *Tipula paludosa*).

Being in their grub stage very much like little pieces of brown twig about an inch long, Leather-jackets are not easy to see, but they should be destroyed when found. The grubs have no legs at all. In their fly stage they are familiar as "Daddy-long-legs." Further information as to their habits and how to avoid being troubled by them is well given in No. 11 of the Board of Agriculture and Fisheries leaflets.

*Wire-worms* (*Agriotes lineatus*).

These grubs are very destructive indeed, They will eat nearly everything but mustard, and are specially numerous on light soils. They pierce the centre of the stem of a violet or they eat through the root, which causes the plant to languish and collapse. They belong to that large family of beetles called Elateridæ. How many beetles there are in the world! Three-fifths of all living species, they say, are beetles.

Both in this stage and in their larval (wire-worm) stage, which lasts from three to five years, they are destructive. But it is as wire-

worms that they do their worst to violets. They are about seven-eighths of an inch long, shiny, bright yellow and hard; so hard that it is well to make sure whether you have really killed them. Nothing but cutting in half is quite satisfactory.

In the case of these, and indeed of all insect pests, the secret of freedom from them lies in keeping the soil clean and hoed and in not allowing rubbish and weeds to accumulate; for it is usually among such that the eggs are laid.

When ground is very full of wire-worms we believe that trapping the Click beetles by laying down clover or sainfoin, covering them with pieces of board and examining and renewing these traps every week is a good plan. Baits for the larvæ such as beetroot, or pieces of potato can also be put down, just beneath the surface of the ground. It is also a good thing to dig soot into the soil. Other remedies include the application of one of the Naphthalene preparations that are on the market, and the use of ordinary superphosphate. But we have practically exterminated them by keeping our garden clean.

### *Millipedes.*

Millipedes, a great enemy of the violet, are not to be confounded with Centipedes, which are light brown in colour, run along quickly

when disturbed, and being carnivorous are useful rather than otherwise.

One of the commonest species of Millipedes is *Julus terrestris*, a leaden black, shiny creature, with whitish legs, which coils itself into a round when disturbed. Millipedes are almost entirely vegetarians and are very fond of the root of the violet. They can be trapped by placing beetroots or turnips, the insides of which have been scooped out, under the surface of the ground. But the best plan is to see that one's land is well cultivated and that weeds are not allowed to grow over manure heaps, and that decaying rubbish is limed or burned. Then there should not be much trouble with Millipedes.

As to diseases. Violets are extremely healthy things. They should never have either Spot or Mildew.

In our youth we were brought up to believe that all dogs must have distemper, even as all children "must" have whooping-cough. That belief was first shaken by a shrewd Highlander, who looked after Queen Victoria's collies at Balmoral. "We never allow them to have distemper," he said, "it is most unnecessary." And thenceforward we, anxious to mould our conduct on a Royal model, set out to prove and have proved over generations of dogs the needlessness of distemper.

Now Spot and Mildew are equally unnecessary to violets. Nevertheless, to those who yet find them troublesome we offer these remarks.

*American Spot disease (Alternaria Violæ).*

This disease may appear quite suddenly, and those who are not acquainted with it are liable to be horrified at its sometimes rapid progress. The appearance is most marked. It shows at first as a small brown patch apparently burnt, and in a bad attack these spots quickly increase in number and size and sometimes spread so that they are joined together ; but each spot retains its dark centre, although the outside portion becomes nearly transparent.

When plants are really badly attacked we recommend their entire destruction. In any case bad leaves should be removed and burnt immediately, as the fungus is one that is capable of extremely rapid development. But although many violet growers consider this to be the most serious trouble with which they have to deal, and most private gardeners regard the faintest traces of it with horror, we do not consider it a thing to be greatly worried about. Where plants are kept in a well-ventilated, healthy, growing condition there is practically no opportunity for the develop-

ment of Spot, and if it does appear it can quickly be checked.

Since damp conditions are favourable to the growth of the spores the trouble is more likely to occur with the Parma than with the single varieties of violet, as the leaves of the former remain damp after watering much longer than does the foliage of the latter, which is less close. But even so it is a trouble that should never occur, as it indicates bad cultivation.

M. Millet also, after many years of observation, does not consider the disease so deadly as it first appeared to him. And his method of treatment is to powder the injured plants and the ground surrounding them with Flowers of Sulphur. For ourselves, we spray with cuperum or Liver of Sulphur at certain stated intervals throughout the late summer and autumn, as it is then, if ever, that the disease makes its appearance. But our practical immunity from it is, we believe, the result of maintaining healthy conditions of growth and of keeping our garden clean.

#### *Mildew (Peronospera Violæ).*

This produces a whitish, felt-like covering on the under surface of the leaves. It is generally caused by excessive damp, but also by lack of ventilation when the violets are grown under glass.

The best preventative is to keep the ground well forked and to remove and burn the decayed leaves, and in the case of house cultivation, to keep an even temperature. When the first signs of mildew appear the leaves can be dusted with Flowers of Sulphur. Or in bad cases the plants may be sprayed with potassium sulphide. But it should be considered a disgrace for any violet not a Parma to suffer from Mildew.

This is all we have to say about disease. Health is natural, and must be expected.

## Early Beginnings.

OME of our readers who perhaps are thinking of taking up gardening as a trade, may be interested to hear a few particulars about our own experiences. Let us think a moment—what was our stock in trade? Why, a very small but sunny garden, a couple or so of frames, some elderly tools and much cheerful self-confidence. No: we did not at first set out as violet-growers; for a while we were deaf and blind. With adoring pride we looked round our little domain, and as it seemed to our partial eyes that every kind of plant flourished, and as we really were blessed with the gardener's gift of a lucky hand, we determined to begin our mercantile career as a sort of universal provider, with all the gay insouciance of optimistic ignorance.

What plants we ruthlessly dug up and dispatched to all parts of the Kingdom; what seeds we sowed in every kind of contrivance

and nursed to early maturity at express speed ! What beautiful and graceful names we gave to lovely unknown flowers ! The decisions of the R.H.S. were to us as light as thistledown. We look back and smile at the luck that favoured our early endeavours. Orders came from here and there and everywhere, and somehow we were invariably able to fulfil them, owing partly to the fact that we did not permit the sentence " It is not worth while " to cross our lips. However tedious the order, however small the gain, however long the hours that passed as we searched through lists, or books, or papers, for the name of some rare and little known plant—still in the end success crowned our efforts.

Soon we discovered that hard work only whetted our appetite for more. We joined the selling of bulbs to our business.

There is something fascinating in the handling of a polished, plump and well-formed bulb. This new venture brought some curious and rather sad experiences to our knowledge of human nature. Certain of those who had hitherto been accustomed to purchase the various bulbs and tubers for their masters' gardens felt aggrieved when the matter was taken out of their hands, and to show how misguided the said masters were, our bulbs experienced many strange happenings. Some



Marie Louise (improved).



got planted upside down ; some intended for the garden were planted in the greenhouse. Choice and delicate ones were lightly stuck in the open ground. Naturally our bulbs, the pride of our hearts, suffered ; so did our belief in humanity ; so did also the tempers of our unsuspecting customers. We eliminated that part of our universal providership.

As time rolled on the thought came to be more and more forced on our minds, what great tracts of land in England were laid out in splendid nursery gardens. What an enormous amount of capital had been sunk in the erection of horticultural buildings. We grasped in some degree the amount of money, education and long experience that had gone to their making and the building up of the great firms whose names are world-famous.

At last we smiled, a little sadly, and said to each other, "What a tiny craft is ours to be afloat on this great ocean of trade." It seemed more dignified to steer our little vessel into haven, rather than let it be engulfed in that most turbulent sea. We determined to make a cheery end, and decided (changing the metaphor) that the curtain should be rung down on "A special penny sale."

What an amusing thing it was, for this, which was to be the last act in our commercial life, turned out a most exciting and laughable

success. The weather was propitious and the sun smiled gently down while the folk passed to and fro. Smart double broughams with liveried men dashed up to our modest garden gate, and richly dressed customers descended to take a critical survey of our special "Penny Menu." Spanking cobs in smart pony carts trotted briskly up with their freight of laughing purchasers. Pedestrians arrived and made their well-considered choice. One delightful old gentleman intimated that he wished the plants of his desire dug up instantly, also (so slight his belief in common honesty) that they should immediately be packed into a "trug" and borne home under his own supervision by our one "handyman," aged thirteen. A stately lady left her castellated manor to ask for two-pennyworth of honesty. Alas! no "honesty" was here!

So the first day of the great sale passed and others of a like nature followed. Though it was not a stream of gold that flowed into our hands it was at least a cheery copper trickle.

And then—what then? Why then our eyes were opened, and we saw, and our ears were unsealed and we heard with understanding. For from under the high hedge, in the chink of the wall from every nook and corner, filling the air with their fragrance, grew the sweet wild violets, purple and white

and pink: and they whispered, "Oh, foolish humans—if we, the little rustics of our race live and thrive so happily without help, without thought, what would our statelier sisters do, cared for and tended—with all the science and all the art that love can teach? Send for them and you will see, but leave us, oh! humans, in our cosy nooks and corners." We sent for the statelier sisters—and in due time everything fell out as our little friends predicted, but not immediately.

## Experiences.

**F**ROM the day we took up violet culture professionally our real hard work began. In the first place, the small garden was essentially private, not one arranged with the careful precision that trade requires. It was difficult to find any length of open space for those violet beds which would be framed later. One small bed had to be made here, another there, adding enormously to our daily work. No water was laid on, so heavy cans had to be carried long distances. It happened that the first summer was exceptionally hot and dry; there was drought even in the spring. Heads and arms ached. Cuttings put into what we fondly thought ideal soil grew gross and leggy and refused to flower. Others, free, healthy and strong in a semi-uncultivated state, with the richest of purple bloom, pined and drooped and disappeared under our fostering care.

Diseases never heard of and pests we had never seen descended upon our devoted plants.

Sometimes the struggle seemed too hard; but partly the feeling of "hold-on," characteristic of the Anglo-Saxon, partly the pride that resented the undertone of disbelief in women's enterprise, yes, even the very pity that is given to failure made us doggedly continue.

One curious thing we noticed; it was always after a knock-down blow that our spirits rose the highest.

Our office was a small, windowless shed, in which was done all the arranging of flowers, packing of parcels and writing of business letters. The door which faced due east had to remain wide open, there being no other means of obtaining light. The cold on a winter's morning when an east wind was blowing may be imagined. It was not a pleasant experience. But after all, in spite of hard work, some miseries and more disappointments, we had many pleasures. It was joy in the early dawn of an August day before work began to look out from the small summer-house across the sweet-smelling garden to the Common beyond, lying half hidden, half discovered in the silver floating mists, the air alive with melody. We dwelt for a time in fairy-land. Homely bread and butter and tea

in garden mugs and a dew-kissed apple from a tree by way of finish, was a feast worthy of Titania's tasting.

Are you fond of music ? Do you pay down golden guineas to hear the very best ? Come with us and listen. Thrush and robin, tit, hedge-sparrow, lark and linnet—free, all free.

It was still in the early days of our undertaking that an immense horde of snails and slugs descended upon our garden and ravaged it. The work of extermination seemed impossible. However, we laid our plans and began the defence by a determined sortie, armed with little tin buckets containing a strong solution of salt and water, large spoons and old lanterns. It was dusk ; we crept along the hedge-side, under the wall, by the violet beds. The lust of battle and revenge for violets slain, fell upon us. There were eager exclamations, quick scoopings, then plop, plop, another snail was in the bucket. It was not nice work, but we went at it steadily night after night till the end came. The slaughtered were not unavenged. To strained and tired eyes, creeping forms seemed at our evening meal to move stealthily over the cloth, to mount the dishes, to climb the stairs, to haunt our nightly dreams. But the work was done, and we have never had to repeat it.

\* \* \* \* \*

Time passed ; a little bit of land was annexed, the first outward mark of progress ; the two or three frames had now stretched out into long rows. In the open, in the neatest of neat beds, grew our old friends the Czar, Victoria Regina and California. A dead leaf was an eyesore, a footprint an unforgivable offence, a weed grieved us to the heart. We were held fascinated, just one more touch, a smoothing of the rake here, a turn of the fork there. Did ever plants, we wondered have more care lavished on them.

A small part of the land we had recently acquired was heavy, sour and full of vermin. Our losses through wire-worm were very severe. In that first autumn, just when we were looking forward to frames of beautiful flowers, the plants were cut down in a night, like the Assyrian Cohorts, by an unseen foe. Thanks to constant cultivation, much soot, lime and careful manuring, the soil is now excellent.

It is after misfortunes, such as these, that the unwavering belief of a friend in one's ultimate success is of such immense help. Pity disheartens too much, sympathy weakens the fibre, advice and criticism, that are often non-professional and nearly always given too late, fret and annoy ; only steady, unswerving faith braces the mind, puts courage into the

heart and gives new vigour to the will, so crowning the endeavour with success.

These few lines are especially intended for one who, while hearing doubts, criticisms and hints of failure for many years, has remained our believing, unwavering friend.

\* \* \* \* \*

During the severe winter that followed, when there was a good deal of snow, we calculated that attending to the frames alone took five hours of each day.

In the morning we brushed the snow from the covering mats. With the first gleam of sunshine they were removed and hung up to dry, the lights being carefully polished, that every ray of sun might be received and a little air given. Our hands were sometimes so cold and numb that we had to stop and rub each others' to bring back a little life; often they were cut and bleeding. That time the land was swept by the cold north winds. Early in the afternoon began the closing and re-covering. When a high wind blew there was much additional work, as heavy boards had to be laid over the lights and covers. We have had lights that were closely shut down whirled into

the air by a south-west gale and flung to a considerable distance. In the cold nights we made many pilgrimages to see that all was safe—here a little extra covering ; there more protection required. When we spoke of the weather it was always in relation to the violets : good for them was good for us, bad for them was bad for us. Though our borders were enlarged we were still doing all the hard work of the garden, with occasionally the grooming of the pony, cleaning of the trap, harness and stable thrown in. But early rising seems to make all work possible. When the winter was over we carried and stacked some sixty heavy lights to a considerable distance ; a tedious and very tiring piece of work.

A good deal of thoughtful arrangement is required to obviate all needless work, so thought the gardeners of old :

“ A handy place for a handy thing,  
A tidy shed and a bit of string,  
Hammer and nails and a good straight pin,  
Polished tools you can see face in.”

We made our first triumph in actual violet culture with the Princess of Wales and La France which seemed to respond quickly to our care ; yet our first floral success was not a promising one, for we actually gazed at a glorious frame full of stately sweet-smelling

violets and did not know how to dispose of them. Taken with a grain of salt there is a good deal of truth in the saying of one of our pioneer women gardeners: "Anyone can grow a flower; the thing is to sell it when grown."

There is always a good demand for well-grown single violets. It took us much longer to master the proper treatment of the double variety. In England there is no doubt that the single flowers are the favourites. It is interesting to note how the public taste changes. At one time there was so little demand for the double white that had we not loved them for their own sake we should have given up growing them. Now the request for them is constant and increasing. They have a purity and charm which are unique: only those who love them fully understand their message.

\* \* \* \* \*

Spring once more, with eight or ten thousand cuttings to be chosen and planted, and hundreds of others to be packed and dispatched to all parts of the United Kingdom.

In April we knelt down to plant the first spring cuttings, attired in neat apparel; the



Mrs. Arthur.



end of May found us in tattered skirt and ragged apron.

One day stands out vividly in our remembrance ; it was one of the hottest of a very hot spell. At early dawn we used the hose while the dew lay cool on the shimmering leaves ; when the night was young and the full moon shone we turned the hose upon the thirsty land, the spray lifted and fell in a spreading silver arc, the drops pattered on the grateful leaves. The "Kling" of a quoit rang out, thrown on the ground hard by ; laughter and voices followed, then pipes were lit ; the players departed. We were left alone to the silence and the glory of the night.

\* \* \* \* \*

It is our constant gardening experience, after a period of pleasant, genial work, when everything goes with a will and fortune beams upon us, to find that in a day there is a change, an unexpected hitch, even as a smoothly running train suddenly jolts and jars and lessens speed. The easy swing of daily routine becomes a labour. Cold winds strike down and "backen" the young crops on whose early ripening so much depends. Long continued sunlessness

damps off the healthy plants that fill long rows of frames. Weeks of careful preparation may be thrown away. With hard work a certain amount is saved, but discouragement lays his heavy hand on head and arm; one toils doggedly, looking neither to the right hand nor the left, yet in spite of persistent effort no improvement is visible. Is gardening worth it, we ask gloomily, for we are making no headway? 'Tis plod, plod, week in, week out, and for what? Then, all of a sudden, we look round and see that the *seemingly* useless drudgery has worked wonders. We are once more on even lines, the wheels fly merrily round, the hard, barren piece is passed, its lesson learned and a pleasing prospect lies ahead.

\* \* \* \* \*

In our neighbourhood there is a *rara avis*, a farmer who never complains, fair weather or foul, good luck or bad. His voice has a rich roundness of the Sussex burr as he greets you cheerily during a wet hay-harvest or the havoc of a late frost. We try to follow his example—at a distance.

\* \* \* \* \*

In many American novels we are told how the gallants of Boston or New York lavish gifts of choicest flowers on their fair companions of the theatre or ball. Which of our English novelists tell of the innumerable gifts that quiet women of the British Isles send to their women friends? It is one of our great pleasures that we are connected (though only as "middlemen") with this most gracious custom.

\* \* \* \* \*

Faster and faster fly the years; another Easter has come and gone; the violet season is over, the best we ever had. In the garden by the Common, looking to the Sussex Downs, we have built another glass-house, rather larger than the first. Though now it is filled with stalwart young tomato plants, yet with the minds' eye we see it in its autumn glory, purple with violet bloom.

The violet frame has grown and branches out here and there; more workers are required. Students and helpers are busy, not only amongst the violets but with the many side issues, the so-called "catch-crops." Men and boys now do some of the heavier jobs we used to do. All work in cheeriest good-will.

We look back and the path we have travelled seems but short. We look forward and the pathway is lost in the distance.

*April, 1911.*

Alas! that path which seemed to lead by pleasant ways to higher heights of fortune and success came to an abrupt end; the rosy vision of continued and uninterrupted success suddenly vanished.

In the early spring we arranged to double our stock of violets. These were to be planted in the more distant and more recently acquired portion of the nursery, where no water is laid on and only wells are used. The ground was prepared with much thought and labour; skilled and loving hands planted the runners and all went merry as a marriage bell.

During April, refreshing showers fell in beautiful succession, just as the happy little plants required. The first weeks of May passed by and still the weather was ideal—sunshine and shower, sunshine and shower: and then drought, drought, drought. Before we had half finished the planting the ground grew dry and dusty. We watched and waited cheerfully for rain, for was it not spring time?

But no rain came. Time passed. The little plants fought valiantly for life ; pumps were kept hourly in motion ; the heavens remained as brass. The ground grew hot, radiating heat. Then the wells gave out. Only a trickle of water remained and even that was used to try and save what might be saved.

Sadly we watched the fresh green leaves turn pale, then yellow, and finally collapse and die.

At last, in September the rain fell, for us, alas ! too late. Some fifteen thousand violet plants were utterly destroyed—so fades the rosy light of early morn. What says the old rhyme ?—

“ Bad luck to-day, good luck to-morrow,  
Of the past only experience borrow.”

So we bade farewell to the little dead violet plants and turned our attention to the survivors. We also determined that never again should there be a deficiency of water. We are even now engaged in working out a scheme to that effect.

In spite of the past, for us most disastrous, summer, in spite of loss and anxiety, we can still finish on a cheerful note. For not only has the mild weather been a godsend to us but never have our faithful violets blossomed more persistently, more freely, more beauti-

fully ; it is as if they knew how much we needed their help. And never have we received so many kind letters from customers telling how greatly their sick friends have appreciated the fragrant flowers sent to them.

Once more with renewed courage and light hearts we enter upon another year of violet culture.

*January, 1912.*

\* \* \* \* \*

## Continuation of Experiences.

1921.

**H**OW much has happened since the foregoing was written! The world has changed. And much change has come in our own small lives. We are other than we were. And yet those who have gone still remain in what of their presence was essential.

The year 1912, at which point our little record closed, has gone too far away now to be recalled with any sense of reality. All that seems possible is to record a few impressions and trifling circumstances that indicate vaguely the way we must have come.

Certain it is that about this time the number of our students greatly increased, until the choice lay practically between limiting their number or virtually turning into a school of gardening. Now love of your students and love of your garden, though far from being mutually exclusive, as we testify with the

happiest, most grateful memory of those days, have in them certain warring tendencies, as those now in posts of responsibility over unskilled labour will readily concede. And love of your garden is one of the primal instincts. Therefore it gained the day. But in saying that we anticipate later developments. At the time we merely refused applicants beyond the convenient number and became gradually more conscious that the guiding principle in our future work must be perfection of cultivation in every crop raised.

This brought us face to face with the problems of more glass-houses and a better water supply. Now there is plenty of water in the chalk Downs of Sussex, and there are pipes bringing it to our village. But the garden that had grown to be our principal garden was far away down the Common and the cost of laying pipes all that way was considerable. So we lay awake thinking. And the result was that we found it possible by saving every drop of water that fell on the roofs of now increasing glass-houses and preserving it in a large concrete tank, to have our own main supply, pumped to different parts of the garden by a petrol engine. Thus the terrors of a drought were considerably lessened and much heavy labour was avoided.

But we had better add here that the ex-

pedient proved to be only temporary. As more houses were put up the absolute necessity for an unlimited supply of water was apparent, and slowly with the need came the possibility of accomplishment. With pride we brought the water down the Common.

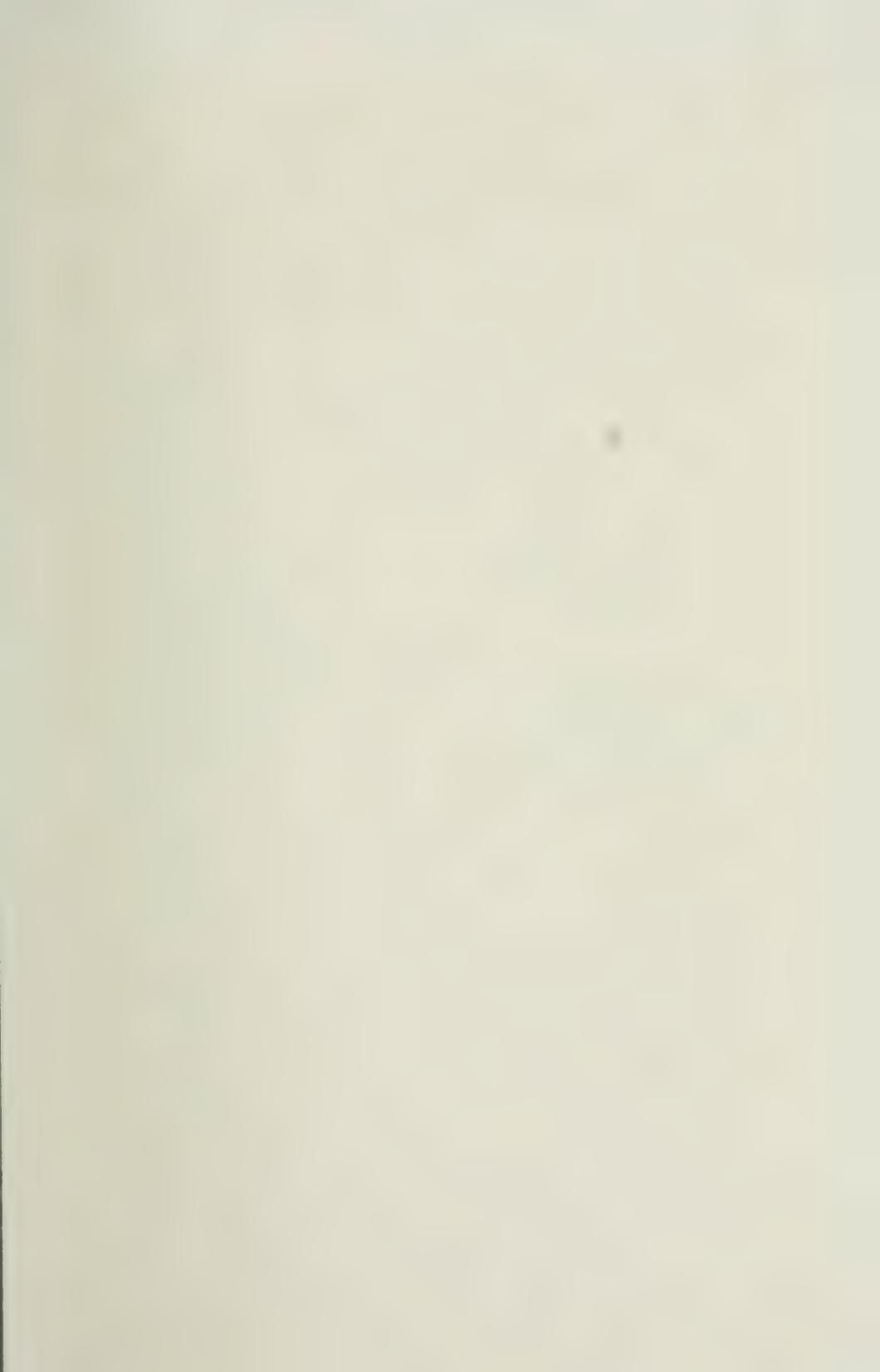
Nearly all the good things of life seem enhanced in value by the knowledge that their supply is limited. We are not thinking of pearls in particular. Such splendid things as chocolates and descendants and secret-information-beforehand and even compliments may be said, we think, to have a "scarcity value." But there cannot be too much water available. To know that however brightly the sun shines to-morrow the chalk Downs will give you all you need is a rest in itself.

By this time we had put up a house for carnations. It is true that this was a fresh departure for us; but let us hastily explain that it was in no sense a slight to the violets. We hankered after carnations because of their beautiful colours, and because they are always in bloom. They were something to show to the visitors who, coming in the height of the summer, were bitterly disappointed that there were no violets to be seen! Our students, too, liked to learn their cultivation. And so we started to grow them, and we think we can claim that they have been a success.

The house that we put up for them being necessarily a high one is excellently adapted for sweet pea growing. This other "side line" therefore we began, and now after the violets are over we lose our regrets in a blaze of sweet peas.

We seem to remember a time when love of bright colours was supposed to be a characteristic of the very young. Perhaps the world is growing younger. Certainly the art which is represented by the New English School of painters is not more conspicuous for its devotion to colour than is the world of horticulture at present. The day of quiet, muddy colours is over. Clearness and brilliance are demanded as never before in flowers. And since we growers must needs follow the popular taste we are glad when it accords with our own.

As our glass-houses increased in number we found that we needed more land. This then was our next expansion. We secured a field away out of the village, ploughed it up and planted it with violets. It was a very stiff clay; it could not be worked when it was too damp and it became as hard as a brick floor when rather dry. During its first year we think there were more days on which it could not be worked than those on which it could. So every opportunity had to be seized, and





De Parme.

down we trooped with our students to attack the ground. We do not know whether to attribute it to "the national character" or to our special fortune in students that nobody ever said it was back-breaking work, or called it an unchristian soil, or even complained in a gentle way. They were splendid, for it was a tough, inglorious job.

But the work was not all hard labour on a virgin clay. There were other times; days when the violets in the frames had to be forked, the old leaves picked off and general attention bestowed on them. Those were sociable occasions, when everything in the world could be discussed. How we talked! Life is full of problems, and while to solve some of them in talk does not necessarily involve the least appreciation of their real nature, still, there are points in favour of this kind of playing at life. Anyhow those were good times, and if work sometimes got done more slowly in consequence—why not? Talking is part of living.

At this time we were cultivating small quantities of vegetables, particularly throughout the summer, in order to give the students a little training in general gardening. This side of our work was soon destined on account of the war to considerable development.

It seems as though no book, however remote

its subject matter, can deal with the years following 1914 without some reference to the war. A world-wide conspiracy to hide from our great-grandchildren the fact that this generation fought as the world never fought before would mean that we should have to be entirely silent about all that we did in those five years, or the secret would come out. Not as pacifists do we write, far from it. But shame at the waste, and regret for the loss that could have been avoided had reasonableness prevailed among nations even to the limited extent that we demand it among individuals, makes one shrink from perpetuating the memory of that time. We are bound to recall it, however, for by it we learned so much. Those were educative years, and forced changes of method even in the quiet world of horticulture.

Like everyone else we lost the men of our staff, two only remaining (and here we should like to pay a tribute to their splendid spirit and unstinted work) so that it became necessary for us to acquire proficiency in certain fresh directions, such as stoking, renovating old "empties," making things "do," loading, wheeling and stacking tons of coal, and many other little jobs. Never shall we forget our appearance after one of the coal days. Coal dust has a penetrating quality excelled by

few substances. We were not clean for days.

By the way, what wonderful people miners are. Some work is dirty without risk, and some is risky without dirt—but to have both in a superlative degree!

With the coming of the war, therefore, we turned our attention more to vegetables. Tomatoes and turnips, beans, peas and carrots, onions and marrows, cauliflowers and cabbages, beetroot, lettuces and potatoes sprang up in soil formerly sacred to violets, until they occupied more than half the ground. And most thoroughly we enjoyed their presence among us. There is something very satisfactory, something almost flattering, in seeing rows of vegetables springing up for you in their best manner. Their beauty too comes back like a forgotten fact. It is as though they said "You want us merely as useful things; you forget how beautiful we, also, are. Now we'll show you." And they did. We had a thoroughly happy time with them. We obtained some tropical onion seed which was to grow onions the size of cannon balls, and we named it. And when it failed to beat the "Ailsa Craig" we grew more interested in leeks whose popularity was even shorter-lived. All the same, as the onion of the future it gave us much joy in anticipation.

Then we invested in a number of large and specially strong sacks, in which we sent away vegetables to town-dwelling customers. Making a nice selection of vegetables and trying to vary it weekly according to the supposed tastes of an imaginary family was quite a good game, and it lasted over two or three summers. But the ever rising cost of carriage by rail at length killed this little enterprise : which was actually providential for us, since the time and trouble involved had long rendered it, as we had come to suspect, a commercial mistake.

Then there were the tomatoes. These we had previously cultivated, and now we increased their number. Every house was filled with them throughout the summer and we even had them in the open. They are an absorbing crop. You sit among them for days and take out their side-shoots, and tie them up and clip their leaves. And you come out from them perfectly yellow. It is a beautiful bright canary colour, and we are persuaded that if no dye has yet been made from them, there is a future and a title for somebody. Tomato-growing has a fascination of its own. But let no one undertake it who has a regard for the hands. Gloves are useless. Indeed it is our unshakable conviction that good work is never done in gloves.

Of our vegetables it was to potatoes that we devoted the most space. We had acres of them. We also took over temporarily from a friend a plot of ground which she had not the labour to work according to the request of the Board of Agriculture, and that too we put down in potatoes. It was freshly ploughed up grass land, and in character almost pure sand, but it grew a most excellent crop. Our recently acquired clay, away down below the village, also grew splendid potatoes. The "King Edward" seemed to love the soil, and kept so well that they were still perfect in April of the year following.

But the setting and the earthing-up and eventually the digging of all the potatoes was to us, without machines, and inexperienced as we were, no small job, and we sought help from all available quarters. Old men and women, boys and girls, all ages from seventeen to seventy lent us a hand, and so the crop prospered and was harvested.

The war gave the greatest possible impetus to the "back to the land" movement. There was a call to the service of the nation and agriculture was not backward in answering it. We would point out that the response to that call came well before, and therefore not in consequence of, improved conditions of work. Shorter hours and higher wages came

afterwards, and we hope they have come to stay. If need be we of the country must devise our own plans to keep them. The land will certainly not retain its people if agriculture sinks back into the old conditions.

We all will do for the public service what we would not endure for a lesser motive. And while everywhere the countryside rose with something approaching enthusiasm to give help because help was needed, fewer and yet fewer people will choose in cold blood a career of toil from morning till night for a wage that takes account of none but bodily needs, and only inadequately of them. The solution of this does not appear to us to be along the lines either of State aid or of a protective tariff. It raises wider issues, and we shall need wider minds before we seize it.

To return to potatoes. We doubt whether the joy is describable that comes when you stick a fork into the ground and turn up a trug-full of large white tubers; therefore it must be taken on trust. It is a glorious moment, dulled only by too constant repetition.

It was not vegetable growing alone that the exigencies of the war forced us to learn. We learnt besides numbers of small economies in time and method as well as in material. Also it forced forward larger and longer-sighted

ideas as regards business and possible achievements. You do not sow and reap, chiefly with the aid of women and children, a bigger acreage than you would once have attempted with the help of all the men you wanted without realising that one's efforts are in the main far below the level of one's powers. If the apparently impossible can be achieved in one direction why not in others? That was the general lesson that the war years taught. And we have attempted to profit by it.

Perhaps they taught something else too, and that was how to bear patiently the extreme interest suddenly taken by the State in all the affairs of one's daily life. In particular we think of a paper issued by the Board of Agriculture and Fisheries. It had at least sixty-five questions, as many as possible of which had to be answered with something approaching accuracy.

Not long ago a friend lent us a copy of the Sussex portion of the Domesday Book, and since we have seen the questions which our unwilling ancestors were obliged to answer we feel that the world has changed less perhaps than we think. Not only did the emissaries of our most efficient Norman Conqueror go round every hamlet and village asking who were its owners, who its principal tenants, its freemen, its homagers, and its serfs; what

was the amount of its meadow and pasture land, and its wood ; the number of its mills, and hides and fish ponds, its oxen, sheep and swine, and other questions, but in some cases even the value of the porpoises in the tidal rivers, the herrings in the sea and the eels in the fish ponds were reckoned. Moreover one valuation was not enough. Three periods were given for which the estimate had to be made out, the first being in the Confessor's time, the second soon after the Conquest and the third at the time of the Survey, about 1086. No wonder there were riots in some parts. We feel sure we ourselves should have rioted over the eels.

And the marvellous thing about the undertaking was that apparently the whole enquiry was put through and tabulated in a little more than a year. Are we as prompt as that now ?

Next time a paper of questions comes to us we shall think of the trials of our forefathers and ponder on the unchanging nature of bureaucracy and complain more philosophically.

As to the violets all this time, we were keeping them going, of course, and steadily improving their quality and our own standard of cultivation. They remained as before our principal winter crop, and every year we

fondly thought them better than the last. But the Parma violets suffered badly. They always need more care and attention than the single varieties, and what they suffered from was unavoidable neglect. During the vegetable régime we practically lost the stock of them, and we have been long in re-establishing it. It was sad when they slowly deteriorated and died, for there is no scent in the world like theirs.

As time went on we became more and more fully impressed with the value of selection in improving one's stock. We felt that, if our violets were to become all that they might, selection must be carried out to the utmost; there must be skilled handling only and we must sacrifice something for it. And what we sacrificed was the training of students.

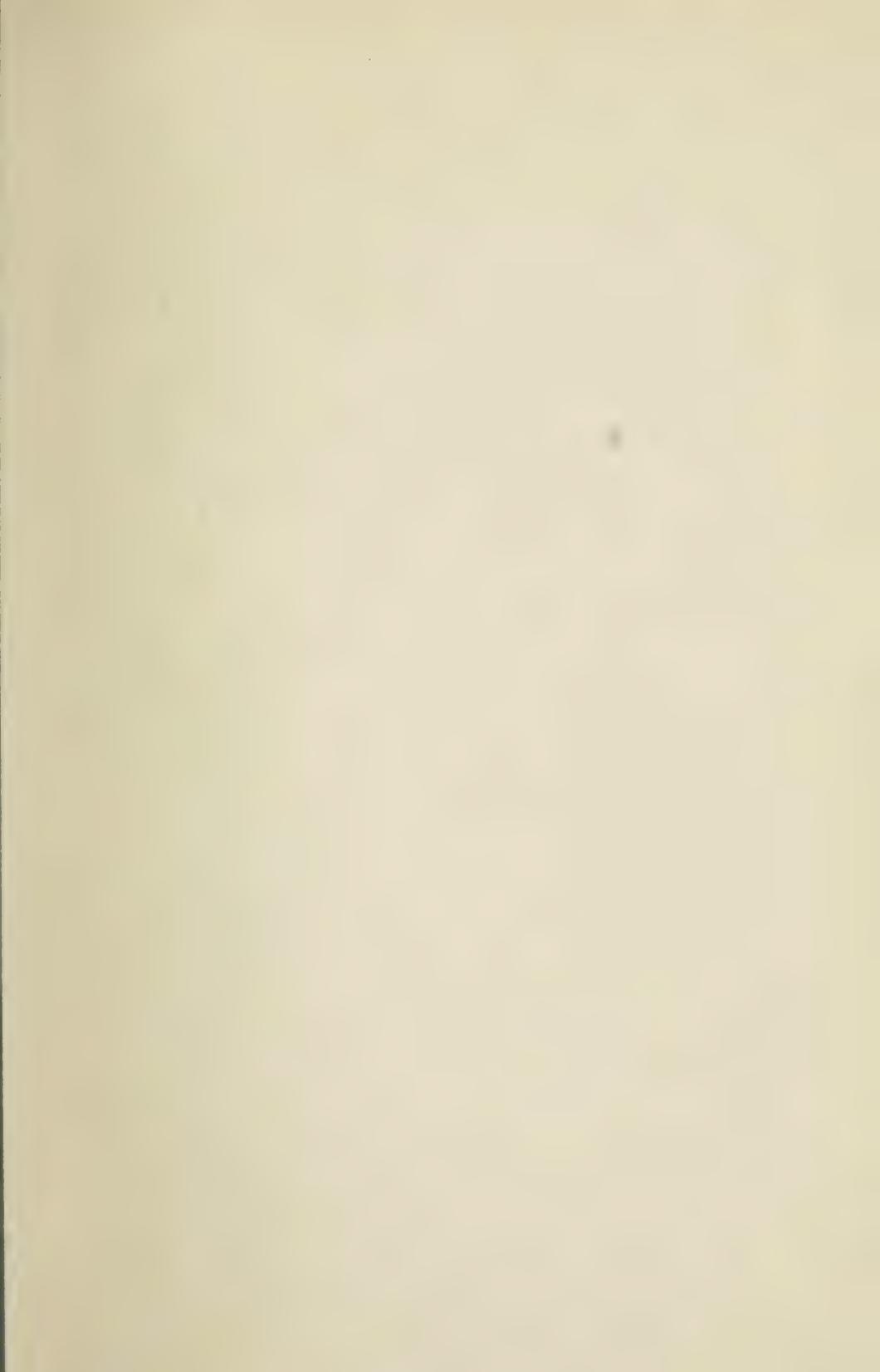
It is quite obvious that when one sets out to learn something there is bound to be a certain spoiling of the material learnt on, however keen and careful the learner. And as soon as the student attained to a fair amount of skill she naturally passed on to other work. So there was nothing for it but to close that side of our activities. And this we did not suddenly, but by ceasing to take fresh students as the existing ones left.

But it was a good time that we had; and if any of those who helped to make it so ever

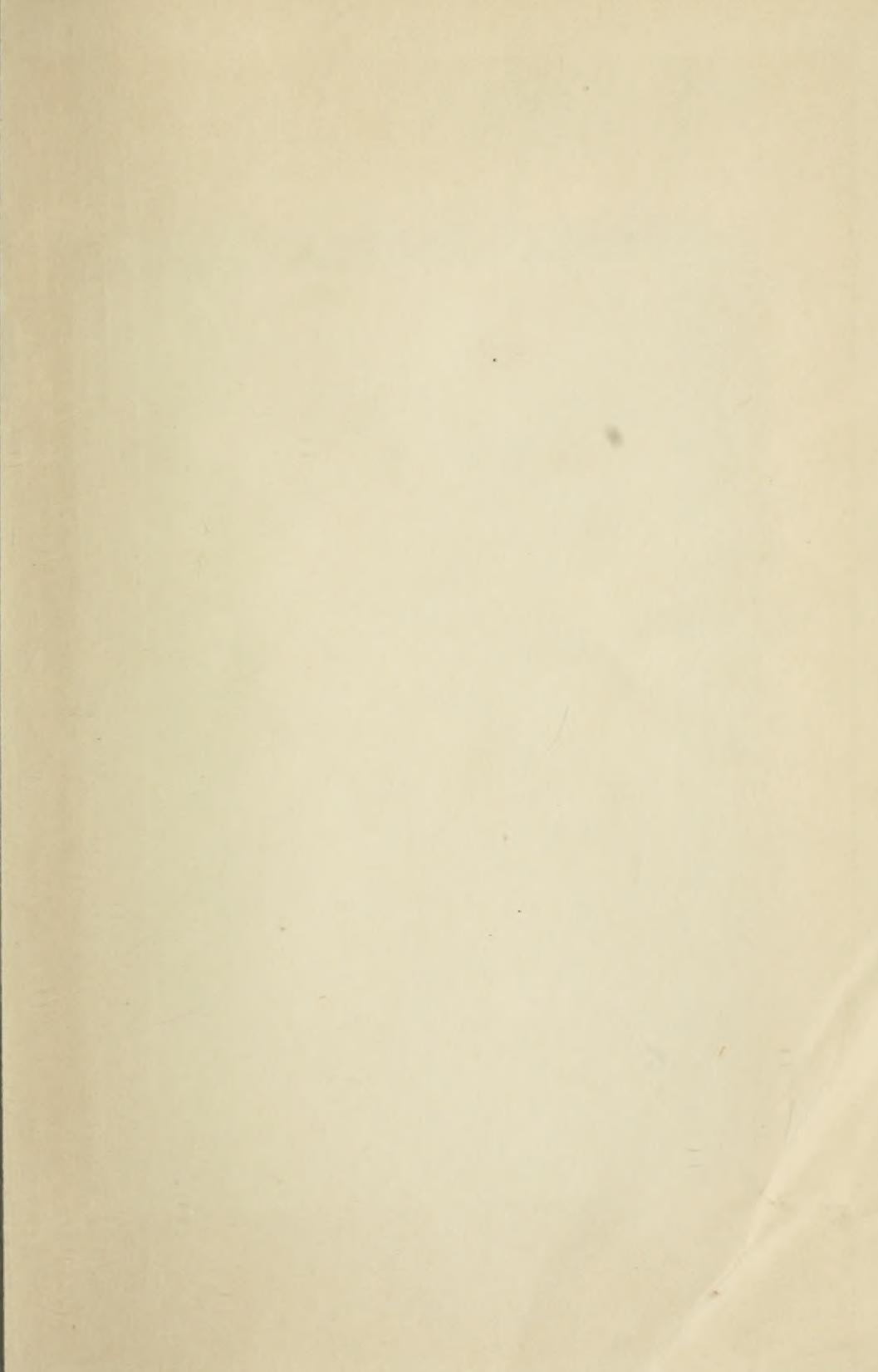
read this we would gratefully remind them of it.

Thus the close of the war found us busier than ever, a band of permanent workers, looking forward to better and better achievement in the future.

In the tale of our earlier experiences we had occasion to remark on the kind letters we received from our customers from time to time. Such letters have continued, and we thank their writers for the encouragement they have given. If thoughts are the important things they are now on all sides said to be it is certain that we owe much to those who have held us with kindness and confidence in their minds. We ask nothing better than the old Scotsman's treatment of his friends—"When I think of ye at a' I think kindly, but I prefair to occupy the intellect with mair profitable thought."









UNIVERSITY OF B.C. LIBRARY



3 9424 00615 2091

SB 413. V8 A4

FORESTRY  
AGRICULTURE  
LIBRARY

