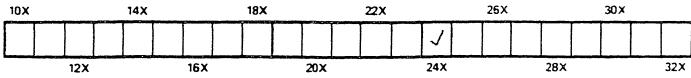
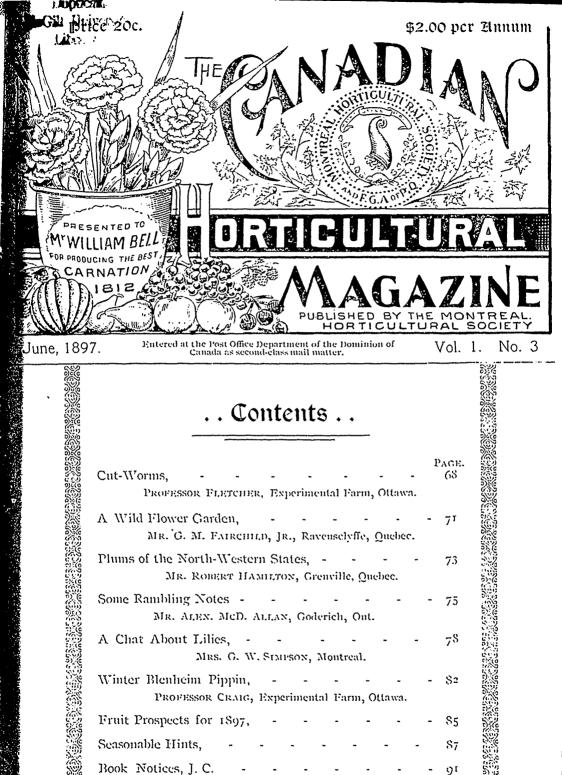
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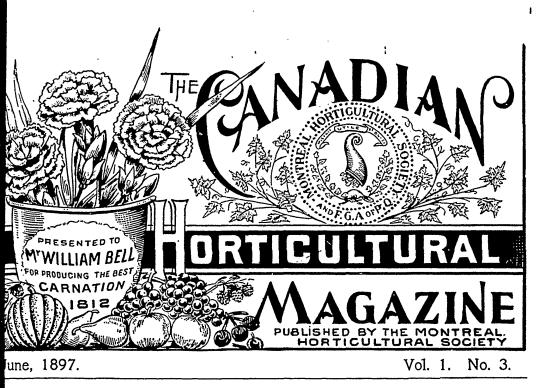
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#### CANADIAN HORTICULTURAL MAGAZINE.

### CUT-WORMS.

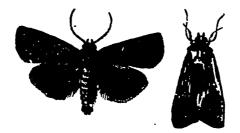
BY PROF. FLETCHER, EXPERIMENTAL FARM, OTTAWA, ONT.

There is little necessity, unfortunately, to explain minutely to gardeners what a "cut-worm" is. The annoying habit of this class of insects of cutting off young annuals as soon as planted out early in spring has made them only too well known. I do not intend to say much here on the insects themselves, except in a general way. I wish merely to draw attention to one or two remedies which have given excellent results to many of my correspondents, and which I believe will be of use to some of the readers of the Canadian Horticultural Magazine.

Cut-worms may be described, in a general way, as smooth, almost naked, greasy-looking caterpillars, of some dull shade of color similar to the ground in which they hide during the day. Their habits are nocturnal, that is, they feed at night, and lie hid during the daytime.

The life history of most of the cut-worms is about as follows: They are the caterpillars of dull-colored active moths, belonging for the most part to the three genera, *Agrotis*, *Hadena*, and *Mamestra*, and in North America alone constitute an army of no less than three hundred and fifty different described species—many of which are at times very abundant. The eggs are laid in spring, summer or autumn, and the insects pass the winter either in the perfect moth state, as a half-grown caterpillar, or as a chrysalis. Those which hybernate as moths lay eggs in the spring, and moths are produced in autumn.

The eggs which are laid in summer or autumn hatch soon after (except a few kind which winter over as eggs), and the caterpillars either become full-fed the same season, and pass the winter under ground in the chrysalis state, or, after feeding for a short time, become torpid, and so pass the winter beneath stones, heaps of rubbish, or in cells beneath the surface of the ground. The injury done by the young caterpillars in the summer and autumn is seldom noticed, on account of the abundance of vegetation at that season of the year; but in the spring, not only are the caterpillars larger and capable of more mischief, but the land is cleared of all vegetation other than the crop which is to be grown. Cut-worms are then particularly troublesome in gardens, cutting off young cabbages, tomatoes and other annual plants as soon as pricked out, or mowing down young beets, carrots, etc., as soon as they come up. When full-fed these caterpillars burrow into the ground to a depth of some inches, and turn to brown chrysalids inside a smooth cell or slight cocoon. The perfect moths emerge a few weeks later. They are very active at night, and when disturbed have a habit of dropping to the ground and remaining perfectly still as if dead, where, from their



colors, they are difficult to detect. When at rest their wings lie horizontally over their backs, and the upper ones entirely cover the lower pair. The upper wings are generally crossed with one or more waved lines, and always bear two characteristic marks—one about half way down the wing, orbicular in shape, the other nearer the tip, reniform, or kidney shaped. The illustration shows the Gothic Dark Moth (*Felt:a Subgothica*, *Haw.*) This is the moth of the common and injurious "Dingy Cut-worm."

REMEDIES.—There are many remedies for cut-worms, but I wish now to draw special attention to two or three only.

BANDING.—This may be done by simply wrapping a piece of paper around the stem of a young plant at the time of setting out, leaving about two inches of the paper above the ground, and nipping off the tips of any leaves which hang down to the ground.

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A similar remedy is, surrounding seedlings with a strip of tin, which may be bent into shape round a hoe-handle, and can be easily opened and stored away for future use after the cut-worm season is over.

Old tomato cans with the tops and bottoms melted or cut out, and the side unsoldered, answer admirably.

POISONED TRAPS.—Placing between the rows of infested beds bundles of grass or leaves of any kind (succulent weeds will do as well as anything else), loosely tied together, and poisoned with Paris green, will be found a useful means of destroying large numbers of these pests. If the land is known to be infested put out the bundles in the evening two days before planting.

POISONED BRAN.—Mix enough Paris green with wheat bran to give the latter a faint green tinge (about one to fifty.) Mix thoroughly, dry, then moisten with enough water to make the bran into a soft mush. Put about a teaspoonful of this mixture every four feet along the rows of beets, carrots, etc. The cut-worms seem to be much attracted by the bran, and even eat it in preference to the growing plants.

If the poisoned traps are found to fade too quickly in hot weather, this may be prevented to a certain extent by putting them out in the evening and covering them with shingles. They are, of course, attractive to the cut-worms only when in a fresh condition.

JAMES FLETCHER.





BY MR. G. M. FAIRCHILD, JR., RAVENSCLYFFE, QUEBEC.

When the idea of a wild flower garden first suggested itself to us we went to the text book of Nature for advice as to how we should make it, and where it ought properly to be placed to secure the best results. The great majority of our native flowering plants love the shade, moisture, and rich mould of the woods, but again there are some of the more beautiful forms that bask in the sunshine of the open fields. To combine all these requisites required a careful inspection of our available spots. We finally hit upon the shade of a great spreading white pine, which seemed to offer a sufficient shelter on its north, from the sun, while the south side received a sufficiency of sunshine to give the field flowers every chance to develop. For a space of twenty feet around the trunk of the tree the earth was roughly broken with a grub hoe. We then spread some old and well rotted leaf mould to a depth of six inches, and trod it well down. Our garden was now complete and ready to receive its first occupants. If successful with them our scheme embraced at least two specimens of all our local flora, and here I

might mention the fact, that the flora about Quebec is exceedingly rich and varied. In a single morning's collecting tour we have brought in as many as forty varieties of wild flowers. For our garden our search for plants began early in May. The equipment for the field was two good sized grape baskets and an ordinary gardener's trowel. Hepaticas, spring beauties, sanguinarias and dog-toothed violets, ginger root and trilliums, both purple and white, while yet in flower, were first experimented with. They were dug with as little disturbance to roots as possible, and as quickly as circumstances permitted they were stransferred to their new home, the mould carefully and well pressed about the roots, and then well watered. For several days the watering was repeated, when we observed with much pleasure that every plant was well taken, and in some instances new flowers were opening. There was now no doubt as to the success of our venture and we rapidly added variety after variety. In every instance when care was exercised, and a proper situation was selected for the plant, followed by copious waterings, it throve. Wood ferns were finally included in our collection, and a large patch of the delicate native maidenhair became quite a delightful feature of the garden. In one of our most distant search expeditions we secured some plants of the trailing arbutus, together with a box of its native sand. We mixed some of this sand through the leaf mould, and the plants were set out in the mixture. This experiment was a doubtful one at best, but we are proud to here record the fact that we saved one plant, and it is now alive after four years, and each spring it has four or five clusters of its fragrant flowers. Many botanists have asserted that the arbutus would not bear transplanting. We have even brought some of our river-side flowers to a fair degree of perfection, such as the saxifrage beach pea, and marsh marigold. Almost all our native orchids, and we have some very lovely forms, have flourished in our garden at one time or another. We have had as many as fifteen or twenty varieties of wild flowers in bloom at once, and the display made was exceedingly beautiful.

To those who have the space and the necessary conditions of

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shade, we say—prepare a wild flower garden, and if there are young people turn it over to them. It will not alone be a source of pleasure, but a delightful way of acquiring a knowledge of our Canadian flora. G. M. FAIRCHILD, JR.

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#### PLUMS OF THE NORTHWESTERN STATES.

BY MR. ROBERT HAMILTON, GRENVILLE, QUE.

It would be predent to state at the outset of this paper, that the Northwestern plums will be of almost no value where the best European plums can be grown, unless, perhaps, that the plum season may be lengthened by means of them—some of them ripen late in October. In point of quality none of them can be called first class, at all events when compared with the luscious blue and yellow plums of Europe. Nevertheless, they have good qualities, and a character all their own that renders them by no means despicable.

First of their good points is their hardiness. In passing, it may be said, that some of the so-culled Northwestern plums are probably from the Southwest. They have foliage more like an apricot than a plum, and do not resemble the well known Northwestern varieties. A second good feature is their exceeding thriftiness under adverse circumstances. One inconvenience of theirs is their too free suckering. A third point in their favor is, that they have few insect enemies, and do not appear to be subject to black knot or blight.

A fourth point in their favor is their productiveness. They bear heavily and constantly. They do not try our patience like the foreign varieties. They begin to bear early, and go on bearing, some of them, more or less, every year.

As to the qualities of the fruit, and first—their size, they are small, or at best only medium. Most of them are small, a few are

medium-sized. But what they lack in size they make up for in number. Next, they are thin-skinned, and very juicy—soft in fact; some of the smallest are rather firm in texture of flesh. These are features that lessen their value for commercial purposes. They will not carry, or ship, so that their market must be a very near one, a home market.

In color, they are not unlike our native plums. They range from a bright straw yellow, through deep orange to red, sometimes almost bright, to a deep dark red or brown, and before the bloom is rubbed off, some of them are of a bluish tint.

In taste, they are sweet, with a dash of astringency. But their sweetness is peculiar sometimes, it is called honey sweet, but it is more like a melon sweetness, and the flavor seems to be that of the melon also. The best of them are very eatable, and are better consumed in that way than in jam or canned. Their sweetness seems to disappear in cooking, and the acidity and astringency are then more apparent. But to those who like sharpness in jam, as in currants and gooseberries, they are very agreeable.

Out of ten or twelve that I have tried the only ones that I would dare to recommend are the "Desota" and the "Forest Garden." The latter I regard as the better one. It is larger and sweeter, and cooks fairly well. ROBERT HAMILTON.

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#### SOME RAMBLING NOTES:

#### BY MR. ALEX. MCD. ALLAN, GODERICH, ONT.

In your April issue I made some reference to the necessity for laying out and ornamental planting of school grounds. A few days since I was forcibly reminded of my thoughts, and had before me an instance of the fact that grounds should be laid out before buildings are erected, or at all events a rough outline settled, so that buildings may be placed where they will appear to the best advantage when the final touches are added in the way of roads or walks, and general planting.

I was called upon by a County Council to lay out the grounds in connection with their House of Refuge. It was evident at once that the buildings had been wrongly placed, and that any eye possessing the most ordinary views of landscape work, would have made a different placing. It is a splendid practice for officers and members of our horticultural societies to discuss and exchange views upon the proper laying out of all public as well as private grounds. Following such a practice in any community we will soon find a practical issue in the way of more ornamental landscape architecture.

#### SHIPPING FRUITS.

Situated as your Society is at the head of navigation, the fruit growers of Canada will look with great expectations for the results of your influence, especially through your Magazine, for obtaining a more perfect system of ocean handling and carrying our fruits. To ensure proper landing in Britain, we must have a more evenly cool vessel atmosphere while in voyage. The cool blast system should supply this if properly worked, as the ocean coolness is all that we require to meet the desired end. There is no reason why our hard fruits should land on the other side of the ocean in a wet and "wasty" condition; indeed our softest kinds should be carried perfectly. By keeping the compartment where fruits are stowed supplied with a cool, dry blast constantly, this much desired object will be attained, I feel satisfied.

#### SELECTION.

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We have arrived at a period in Canadian horticulture when we should, I think, select varieties of kinds suitable to special parts of the country, and wherever found that specialties can be produced to the highest state of perfection under special circumstances of soil, climate and cultivation, we should encourage the culture, and discourage the same under circumstances where difficulty is found in arriving at the same degree. I believe we have our specialties all over this country in fruit culture, and while under some circumstances we may be able to grow fairly well many kinds to satisfy a home demand, we may discover that other sections can produce some of these of a much higher, degree of excellence. It is when we meet in market competition that each of us finds out some weakness. For instance, I think it is pretty generally admitted that Quebec, and more especially Montreal island, can produce the best Fameuse apples, either in appearance or flavor, of any part of Canada. In the West we cannot compete in general points in that grand family of apples. And where can we find the Musk Melon so perfect in flavor as from your gardens? Therefore, imagine our position in Britain if we exported only the best, taking flavor as well as general points into consideration. That is, if we selected for export only varieties from each section specially adapted, and grown to the highest possible state of excellence.

In the West we are growing at random, and hence placing a large quantity of imperfect fruit upon the market. We have sections adapted for peach and grape culture, but where the apple generally is of a softer texture, and holds less flavor than in other rections. I think, looking at the extent of fruit growing and the capabilities as well as market requirements, we should begin earnestly to select varieties best suited to the circumstances of each section, and in this way we can all excel in some specialty.

#### NEW APPLES.

I would like to see the Stotts Russet tried in Quebec. I am

not aware that it has been, and if it proves sufficiently hardy, as I believe it may, you will have an apple that there is money in for export. It has the strongest Russet wood I have ever seen, a great bearer, and exceedingly handsome fruit. The apple averages larger than American Golden, of about same shape, a perfect russet with a bright crimson cheek; flavor tart as Rox Russet, and about as long a keeper. If spared another season I will be glad to send the wood for grafting, and have a test of hardiness made.

ALEX. MCD. ALLAN.



FAMILIAR NOTES ON MODERN GARDENS.—Line omitted at page 9, line 10, of last number, for which an apology is due to the author : Lt.-Col. F. Turnbull, Gustavus G. Stuart, William Herring and Simeon Le Sage.

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Photographs of notable Plants, Fruits and Flowers will be gladly received by the publishers for reproduction in these pages.

\*

QUESTIONS may be freely asked on the various branches of horticulture, and answers will be willingly accorded.

The Mcntreal Horticultural Society and Fruit Growers' Association includes in its membership some eminently competent authorities cn botany, entomology, and those sciences identified with horticulture, by whose courtesy enquirers may be assured of an intelligent and accurate answer to their questions.

### A CHAT, ABOUT LILIES.

#### BY MRS. G. W. SIMPSON, MONTREAL.

A little friend asked me, one day last summer, how she could most easily learn Botany. Her questions interested me the more that she went on to explain that her lessons were so many, and her time otherwise so fully employed, that she did not find it possible to read any books on the subject without neglect of the tasks set her by recognized authority, and that any neglect of her appointed studies was simply impossible to her mind. Still she loved all flowers, made them her friends, when she got the chance, and wanted sadly to know more about them.

I greatly admired the dutiful bent of the little girl's mind, and as she seemed to expect an answer I said, speaking generally, that she need not trouble herself about books just at present since her duties did not admit of it, but content herself with making acquaintance, say, with one new flower every month-gather it and examine it as it came out in fields and lanes-choose the commonest flowers she could see-look at them with loving eyes, count their parts, and think about them while she compared them the one with the other. She would find, I added, after a while, that almost without effort she had about the same knowledge of them that she had of her neighbors and friends; she would know when to expect them, how they were dressed, whether they were happy or miserable, and what kind of tempers they had, whether pleasing, gentle, kindly, agreeable, or harsh, thorny, disagreeable, or perhaps even offensive-these and many other qualities she would learn as she amused herself in the yard or garden, or walked through the by-streets or fields.

About Christmas-time I met her again and enquired casually after the Botany studies. She had found a difficulty, she told me. In mid-winter there were only flowers in the shops, and so far as she could make out, these shop-flowers were not useful in Botany lessons. She did not see, therefore, how she could make a new acquaintance each winter month. As she is a very reflective maiden and did not press me for a solution of her trouble I made no suggestions at the time. But the case recurred to my mind at intervals, and one day I amused myself in writing down certain thoughts, which I hoped might lead her in the direction she wished to follow.

The month was February, and Hyacinths were in all the Florists' windows and on her own mother's drawing-room table. The Hyacinth is a member of the Lily family, and may be expected to have many, if not all, of the family features. It has a floral envelope or *perianth*, shaped like a bell, formed of six leaves grown into one, the points of the leaves being distinct and countable. The word *perianth* means, round about the flower. Let us think of the perianth as a Flower-house. The Stamens, six in number, are the males who live there; the Pistils are the females; Dame Nature is mistress and house-keeper. Madam Nature has the unusual power of being in every place at the same time. She works continually night and day, and requires of her servants fidelity and order. If they fail in either, they pay the penalty in sickness or premature death.

All over Hyacinth-House the walls are filled with cupboards stored with honey in a hardened form. When growing in the open air, the Hyacinth at certain seasons keeps open house, and the nectar or honey is there for the entertainment of her guests. When all is ready she opens wide the door, turning her flower bell downwards to keep off the rain.

What kind of visitors does she expect? Bees, most likely. They will scent from afar the inviting perfume, fly in at the open door, take a good hold with their slender claws, thrust in their heads, and with proboscis sharp as a needle, pierce the honey-cake and fill themselves with plenty. In the meantime, the men-servants, standing each in his place, wearing golden liveries, have their appointed duties, and are fulfilling them. They know the honey is not for them, and they do not want it. They prefer the clear juice or sap their roots make, and send up the stem to every part of the

#### CANADIAN HORTICULTURAL MAGAZINE.

plant. They like to breathe the fresh air and feel the sunshine. But what are their duties? While the bees are intent upon piercing the walls for honey the Stamens are dusting their hairy coats with their own bright yellow pollen. This pollen the bees will take away on their coats to the next Hyacinth-House they visit, and will rub it off there on the Sticky Stigmas as they work round the bell seeking honey. The Stigmas want this pollen for their own purposes, about which I will tell you presently. But first I must speak about the Stigmas themselves.

You will remember that the Pistils are the female servants of the flower-house. Every Pistil is considered to have three parts, a Stigma, a Style, and an Ovary. The Ovary of the Hyacinth is in the bottom of the bell, the Style is so short that one cannot see it, and the Stigma sits on the top of the green ovary. There are three Stigmas packed quite close together and three Ovaries, or as it is sometimes described, an Ovary with three cells. You cannot see the Style which joins the Stigma to the Ovary, not in the Hyacinth that is, but in many flowers it is long like a graceful neck, and adds to the beauty of the females. The Stamens have two parts, a Filament and an Anther. The Filaments in Hyacinth, six in number, seem to be buried in the honey-cake, and the Anthers sit on the top of the ventricose tube of the perianth—on its throat. The Filament is a stalk which carries the Anther; the Anther is a bag or sac containing yellow pollen.

Although I have called them Dame Nature's servants, you must understand that the Anthers and Pistils are the important parts of every flower. They are Crown servants—the ministers of the Cosmic Queen. The Perianth is made to suit them, and the bees, butterflies, and birds are sent to serve them. When the Anthers have parted with their pollen they die. Madam Nature has no further use for them. But it is otherwise with the Pistils.

As a rule, a Pistil is not happy—does not thrive—if it is filled with pollen made in its own flower-house. It always desires the pollen from a neighbor house, but is not able to go and fetch it. Therefore the bees bring it to her on their coats. That the Stamens

and Pistils may not interfere with each other, they have various plans for receiving their visitors separately. Living as they do so close together they need to be most orderly in their habits. A very common way, and one you will easily understand, is to have different times for being "at home." The Stamens usually "receive" first. While they are dusting the bees, the Pistils, which are tiny tubes, keep their mouths close shut, so that no pollen can reach them. When the Stamen sacs are empty they open their mouths and prepare to "receive" the visitors in their turn. The bees come as usual, bringing with them the neighbor pollen on their coats. Thev thrust in their great heads as before, anxious to reach the thick rich honey-cake beyond the throat of the perianth tube. The Stigmas satisfy themselves with pollen and then close their tubes. The perianth fades. The time of the three-celled Ovary has come. This little organ swells and swells until it becomes a handsome green little fruit. Then in its turn it hardens and splits or opens. Now we call it a pod. The seeds are ripe and fall out. The Hyacinth plant has accomplished its chief work for the advancement of Dame Nature's kingdom.

Two kinds of Hyacinth are usually found at the Florists in their season, *Hyacinthus Orientalis* and *Hyacinthus Albulus*, that is, the Common Hyacinth and the Roman Hyacinth. They both grow wild on the north shore of the Mediterranean Sea, and in the wild state the Common Hyacinth is generally blue in color, while the Roman variety is white.

I have not told the whole story of the Hyacinth. I have said nothing about the leaves; nothing about the stem; nothing about the bulb; nothing about the roots. I have but introduced you to a member of the Lily family—a very large and ancient family, with a world-wide classic history. The Lily is found growing wild in the water and on the dry ground; on the mountain and in the plains; in the shade and in full sunshine. Under cultivation it shows all colors and hues. The family feature by which they are most easily recognized is the number six—a Perianth of six leaves—six Stamens each with a two-celled sac—three Pistils leading to a three-celled

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Ovary with a double row of little seeds in each cell of the pod, as the Ovary is called when it becomes ripe.

Amongst the first flowers of spring on the Montreal mountain are many Lilies. The Trillium, Clintonia, Streptopus, Smilacina, Maiantheum, Polygonatum, Erythronium, and others. As these flowers are gathered and examined and compared with what has been written of the Hyacinth the student will find that the Lily, beginning as a mere acquaintance, has passed into a vast family friendship.

In the meantime, we may expect that the Florists will exhibit Lilies of many kinds, including Tulips and Lilies of the Valley.

LUCY SIMPSON.



#### WINTER BLENHEIM PIPPIN.

BY PROFESSOR CRAIG, EXPERIMENTAL FARM, OTTAWA, ONT.

Some two years ago, Mr. E. B. Edwards, of Peterborough, Ont., drew my attention to the fact that he had in his orchard two distinct types of Blenheim Pippin, or, as sometimes designated, Blenheim Orange Pippin, a late autumn or early winter apple : one, the ordinary type : the other, resembling this in every way except in the matter of season, which was much later. He said that the variation practically extended the keeping season of the variety till spring. About two weeks ago, April 20th, Mr. Edwards again kindly sent me two specimens of this winter form of our old favorite. These were in excellent condition, as to flavor and texture, and had been given only ordinary storage conditions. All specimens of the common type had, Mr. Edwards informs me, decayed some time ago.

Variations of this kind are worth perpetuating. The incident is recorded here for the purpose of drawing attention to the fact that sports of this kind may not be unfrequently met with in our orchards. It emphasizes the advisability when propagating of securing scions from individuals possessing in the highest degree the most valuable characteristics of the particular type which they represent. The accompanying illustration, half size, portrays the specimens forwarded by Mr. Edwards.



#### REDUCED ONE HALF.

By the same mail, I received specimens of Blenheim Pippin from a Quebec correspondent. Here we have a climatic effect expressed upon the keeping season of this apple. As we travel Eastward, along the St. Lawrence, the keeping season of apples becomes longer. I dare say it would not be impossible to find Fameuse apples at the present time, May 5th, (kept without cold storage) in the markets of some of the small towns in Eastern Quebec.

In Dr. Hogg's Fruit Manual, the following interesting reference to the Blenheim Pippin appears :---

"This valuable apple was first discovered at Woodstock, in Oxfordshire, and received its name from Blenheim, the seat of the Duke of Marlborough, which is in the immediate neighborhood. It is not noticed in any of the nursery catalogues of the last century, nor was it cultivated in the London nurseries till about the year r818."

The following interesting account of this variety appeared some

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years ago in the Gardeners' Chronicle :-- "In a somewhat dilapidated corner of the decaying borough of ancient Woodstock, within ten yards of the wall of Blenheim Park, stands all that remains of the original stump of that beautiful and justly celebrated apple, the It is now entirely dead, and rapidly falling Blenheim Orange. to decay, being a mere shell about ten feet high, loose in the ground, and having a large hole in the centre ; till within the last three years, it occasionally sent up long, thin, wiry twigs, but this last sign of vitality has ceased, and what remains will soon be the portion of the wood louse and the worm. Old Grimmett, the basket-maker, against the corner of whose garden wall the venerable relic is supported, has sat looking on it from his workshop window, and while he wove the pliant osier, has meditated, for more than fifty successive summers, on the mutability of all sublunary substances, on juice, and core, and vegetable, as well as animal, and flesh, and blood. He can remember the time when, fifty years ago, he was a boy, and the tree a fine, full-bearing stem, full of bud, and blossom, and fruit, and thousands thronged from all parts to gaze on its ruddy, ripening orange burden ; then gardeners came in the springtide to select the much coveted scions, and to hear the tale of his horticultural child and sapling, from the lips of the son of the white-haired Kempster. But nearly a century has elapsed since Kempster fell, like a ripened fruit, and was gathered to his fathers. He lived in a narrow cottage garden in Old Woodstock, a plain, practical laboring man; and in the midst of his bees and flowers around him, and in his "glorious pride," in the midst of his little garden, he realized Virgil's dream of the old Corycian: 'Et regum equabat opes animis.'

"The provincial name of this apple is still 'Kempster's Pippin," a lasting monumental tribute and inscription to him who first planted the kernel from whence it sprang."

The tree has proved to be vigorous and fairly productive, after reaching 12 or 14 years, as grown in Eastern Ontario. I am of the opinion that it would succeed in the Island of Montreal, and along the Ottawa River, in Quebec. If tried further north, it should be top grafted on a hardy stock, such as Haas, Gideon, or McMahon White. JOHN CRAIG.

### FRUIT CROP PROSPECTS.

#### ONTARIO.

Mr. L. Woolverton, Secretary of the Ontario Fruit Growers' Association, has kindly given us the fruit prospects for Ontario. He says:

"It is yet too early for any definite estimate to be made, because until the fruit is well set, we cannot tell to what extent it may drop, but judging from present appearances we have excellent prospects in many parts of the country. Even the apple is blossoming abundantly, especially some of the choicer varieties, such as "Northern Spy," "Astrachan," "Cranberry Pippin," and "Roxbury Russet." "Baldwins" will not be anything like the crop they were last year, nor will "Greenings;" but the trees are in a vigorous condition, such as they have not shown for years, and the prospect is that we shall have a fine quality of fruit.

Pears are blossoming well, and apparently are setting well.

Peaches are unusually good in the Niagara district, although in the County of Essex they are reported to be largely destroyed.

Grapes are showing well, and Cherries, even English varieties, have come through the winter remarkably well.

I think Small Fruits will also be very abundant.

With these prospects before them the fruit growers in Ontario are hoping for a more prosperous year than last, on account of the fine quality of fruit, and the probable higher prices that it will bring in the market."

#### QUEBEC.

APPLES.—Notwithstanding the exceedingly heavy crop of last year, there is by no means such a dearth of bloom as might be expected. Our old standard, and largest planted variety, the "Fameuse," is showing well, with about half the bloom they carried last year. The "St. Lawrence," "Winter St. Lawrence," "Calville;" "Ben Davis," "Pewaukee," "Canada Red," and the "Russets," about the same proportion ; while our summer apples, the "Yellow Transparent," "Duchess," "Alexander," and "Wealthy," are blossoming very profusely, showing nearly as well as last year. On the whole, the prospects look to a fair crop, and the weather so far has been favorable to the setting of the fruit.

PEARS.—This crop is a very small one in the Province. Trees are in places reported in full bloom, and in others the bloom is light.

Information from Brome County, is that the fruit buds of "Flemish Beauty," and "Ritson" are winter-killed; other reports state "Flemish Beauty" buds have suffered by the cold spell of April 20th, when the buds were swelling.

PLUMS.—We have to report another complete failure of the plums of European origin for Montreal and surrounding districts. The fruit buds have been badly winter-killed; only straggling blossoms show themselves. This is a second year of failure, and is very discouraging for growers with plantations of these varieties. The Northwestern plums and onr own native red, show not the slightest injury, and are heavy in bloom. It is yet too early to speak definitely for the Quebec district.

Mr. Auguste Dupuis, of L'Islet, reports on May 21st—trees are not in leaf; buds are swelling: "Plum trees of European origin and the American varieties of the European species, have suffered a little by the freezing of late fall growth, and fruit buds are injured to some extent on these varieties, but less than the "Damson" or "Orleans." The "Lombard," "St. Cloud,' "Albany Purple," "Washington," "Shippers Pride," on sandy soil, heavily mulched, seem in the best condition of buds and wood."

CHERRIES.—For Montreal and surrounding districts the fruit buds of this crop are in some cases very badly injured, in others no injury is reported, but the blossom is light throughout. Some Russian varieties have blossomed fairly well, where others have been injured, and other Russian varieties have been winter-killed, worse than our old cherries. In this case the injury was done by the cold spell of April 20th, when the buds were swelling. For the Quebec district reports are favorable, though it is too early to state definitely.

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STRAWBERRIES—Reports throughout the Province state this crop to be very severely winter-killed; in some cases destroying the plantation completely. The alternate freezing and thawing in the winter, forming ice on the surface of ground, is responsible for this destruction. Generally speaking, only plants on high and dry situations escaped, and then only when protected.

RASPBERRIES, CURRANTS AND GOOSEBERRIES, have all wintered well, and promise a good crop.

GRAPES.—-Where grown in this Province are generally covered, and have wintered well under cover; otherwise have been injured.



#### SEASONABLE HINTS.

Vases, window-boxes and hanging baskets, planted with ornamental flowering and foliage plants, creeping and climbing vines, when the work is well done and properly attended to, make beautiful garden decorations, when placed in their appropriate positions round the house and lawn. The selection of the plants and their culture are about the same for these several purposes, with the exception that vases and window-boxes require to be provided with thorough drain-The want of good drainage is the point of failure in more age. instances of plant culture than a great many are aware of. Sufficient openings, both in size and number, should be made in the bottom of each box; holes about one inch in diameter, being a very good Have them well distributed over the bottom, say about six or size. eight inches apart. Cover these with good sized pieces of broken flower pot, with the hollow-side downwards, filling in between and above with smaller pieces of the same material to the depth of one and a half or two inches, according to the size of the vase; then sprinkle a thin layer of moss, or if to be had, a handful of horn shavings or hoof-parings from the nearest horse-shoer's establish-

ment; this latter will give vigor to the plants, and serve to keep the drainage from becoming clogged with the soil, and consequently becoming useless. Good, rich soil is a necessity for this sort of gardening, at the same time it is easy to overdo it in richness. A compost consisting of one half good, heavy, turfy loam, one quarter good leaf mould, or extra well rotted manure, and one quarter river sand, with a two inch potful of ground bone meal added, will be found to answer the purpose well. Other light stimulants will be required after the plants become established and well rooted. about once a week being often enough to apply these. Nitrate of Soda and Sulphate of Ammonia applied alternately each week, in about the following quantities will be found to assist wonderfully in improving both foliage and bloom : Half a teaspoonful will be enough for two gallons of water to commence with, and may be increased to twice the strength as the plants progress in size and vigor; remembering that a weak plant cannot take strong food. On the watering, almost everything depends in this branch of gardening. Enough should be given each time to moisten the whole, and then a considerable space of time be allowed for the soil to become dry again. This degree of dryness is the puzzling point, not only to the amateur, but to many who profess the trade. It is hard to define in exact terms when a plant should be watered. To the experienced eye the plants show the neglect of watering at once, but that is where another mistake occurs, as the plants should get their supply before showing any signs of suffering. This fine point can be better discovered by observation than by teaching. More fine results in plant growing depend on the amount of intelligence exercised on this seemingly simple operation, than on almost anything else; suitable soil, heat, light and air excepted. The necessity of good drainage will be thus admitted.

In planting, the mechanical condition of the soil is also important. It should be rather firmly packed, but should not be hard, nor baked. If kept too loosely it will hold more water than is good for the plants. No soil should become like mud, no matter how much water be given to it, and consequently the mechanical condition of the soil is of great importance. A soil in the proper mechanical condition will hold only so much water and no more, when assisted with good drainage. Certainly not enough to hinder growth, whereas an over watered soil becomes perfectly inactive for the time being. The rougher parts of the compost should be placed over the drainage. The free percolation of the water downwards, and the free admission of air currents throughout the whole, is necessary to render the latent plant food in the soil fit for assimilation by the plants in an available form. The depth and width of window-boxes and vases should be sufficient to hold enough soil to sustain a healthy growth for the season, without having to apply stimulants too often.

The choice of plants and their arrangement for these decorative purposes deserve consideration. Contrasting the different foliage effects, both with regard to size and color, and also contrasting or harmonizing the effects of the different flowering plants, will be found to give pleasant combinations of arrangement. A bold robust form of leaf or flower is brought out to perfection in proximity to another beautiful, but delicately formed specimen. Profusion is to be aimed at in the arrangement; scantness produces a miserable effect. When planted they should be fit to be admired.

The varieties of plants available for these decorations are numerous. Amongst those of a bold, striking effect may be mentioned: Palms—several of which are suitable, Rubber plants, Cannas, Dracænas, Cordylines, Bananas, and Grevilleas. Nearly all the varieties of bedding plants may be used to fill in with; and the trailing and climbing vines, though last mentioned here, cannot be looked upon as the least effective by any means. These are simply indispensable. The choice, too, is both extensive and varied; including as it does many beautiful and suitable plants, such as the following: German Ivy, Kenilworth Ivy, single Petunia, Vinca major variegata, Nasturtium, Manettia bi-color, trailing Abutilon, Lobelia, Ground Ivy, Moneywort, Maurandya, Smilax, Othonna, Tradescantia, and many others.

On the shaded sides of the house some lovely boxes could be

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made up with our native ferns, tuberous Begonias, and Tradescantia. With care and attention there is no better way to excel in a pleasuregiving horticultural pursuit, than by garnishing our lawns and windows with these lovely and interesting adornments.

#### "VITIS VINIFERA."

SPRAYING.—Do not spray with the Bordeaux mixture apples that do not "spot;" you will only increase the expense and labor, and probably rust the fruit for your trouble. "Duchess," "Yellow Transparent," "Wealthy," and "Ben Davis," do not require the Bordeaux, and are sometimes very seriously rusted by it. Spray with Paris green and lime only for these varieties.

In spraying for "spot" every twig and branch, as well as the trunk, should be washed with the spray, and should be done from at least four positions for a tree of any size.

Remember that though four or five sprayings are advised, some good effects have been accomplished with one only. If you have not time for four or five, you may have for one; if this one is applied directly, or shortly after the blossoms fall, it will be effective.



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#### BOOK NOTICES.

"Principles of Plant Culture," by E. S. Goff, Professor of Horiculture, in the University of Wisconsin. Cloth, 276 pp.

The author modestly calls this excellent work on plant growth "an elementary treatise, designed as a text-book for beginners in Agriculture and Horticulture." While an admirable work for beginners, it will also be found by advanced students to be a convenient and useful book for reference. The introductory chapter discusses the relation between *art* and *science*, defines culture, as applied to living organisms, and discusses various phases and conditions incident to plant and animal life.

Chapter II. takes up and deals with the "Round of Plant Life" from the germination of the seed to the perfection of the seed again when its life cycle may be said to have been completed. In this way, the structural part of the plant is naturally and easily introduced and described. In Chapter III. those conditions consequent upon environment are brought before the reader; here the author takes the opportunity of introducing many practical hints of great value to the fruit grower. These are all the more useful, inasmuch as the reason for adopting a certain practice is always satisfactorily outlined in advance. Such subjects as light, wind, water and food supply, and vegetable parasites, are treated in this division. Chapter IV. is styled "Plant Manipulation," and discusses propagation, transplanting and pruning. The latter subject is dealt with by Prof. Goff under four heads, viz:-Formative, Stimulative, Protective and Maturative pruning. This arrangement is at once practical and suggestive. Chapter V. takes up "Plant Breeding," that most fascinating, if not most remunerative, line of all horticultural investigation. In the book is included a syllabus of Horticultural laboratory work, which will be of much value to the instructor in mapping out and conducting a line of empirical instruction designed to fix principles rather than methods in the minds of his CANADIAN HORTICULTURAL MAGAZINE.

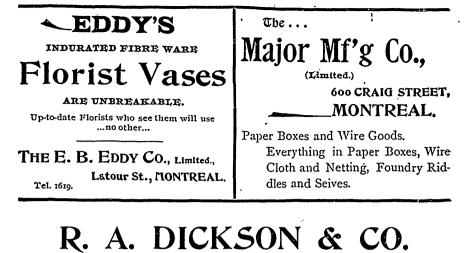
pupils. The volume is printed clearly on good paper, well illustrated and furnished with a carefully prepared index. It is published by the author. While primarily designed to assist the instructor, it will be found useful to the student and practical grower as well.

J. C.

"The American Fruit Culturist," by J. J. Thomas. Twentieth edition, revised and enlarged by Wm. H. S. Wood; 8 vol., 758 pages. Price, \$2.50.

"Thomas' Fruit Culturist," as it has been long and familiarly known, was published in 1846. That it has not in any measure become obsolete is well attested by the fact that the twentieth edition has appeared in new and enlarged form. The late J. J. Thomas was the first President of the Western New York Horticultural Society, the position so ably filled at the present time by Mr. W. C. Barry, of the firm of Ellwanger & Barry, of Rochester, N. Y. The volume which has just appeared was undertaken by the venerable author some time ago, but was entrusted by him previous to his demise, in 1895, to Mr. Wood. That the author has spared no pains to bring the work up to date is apparent by a glance at the descriptive fruit lists. Apart from an occasional botanical inaccuracy, the volume contains an immense amount of reliable information. The chapter by Mr. E. H. Hart, on subtropical and citrus fruits, widens its range of usefulness, and brings it into touch with the needs of Southern fruit growers. In addition to an exhaustive varietal index, a glossary of technical and common horticultural terms is included. The work is profusely illustrated by cuts introduced ingeniously and unobtrusively. As a reference text-book for the student, and a companion of the fruit grower, this edition of our old friend will be much appreciated. I. C.

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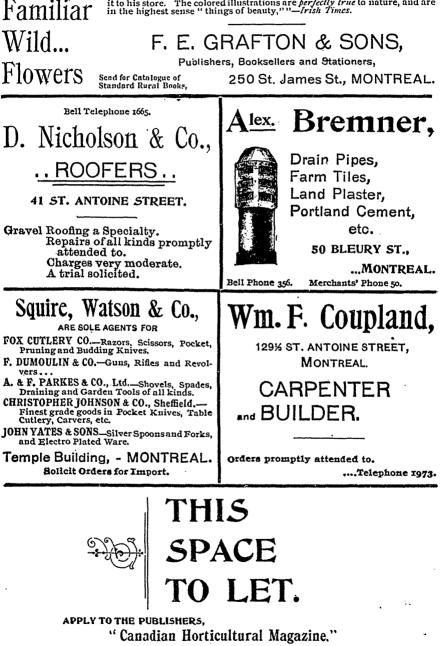
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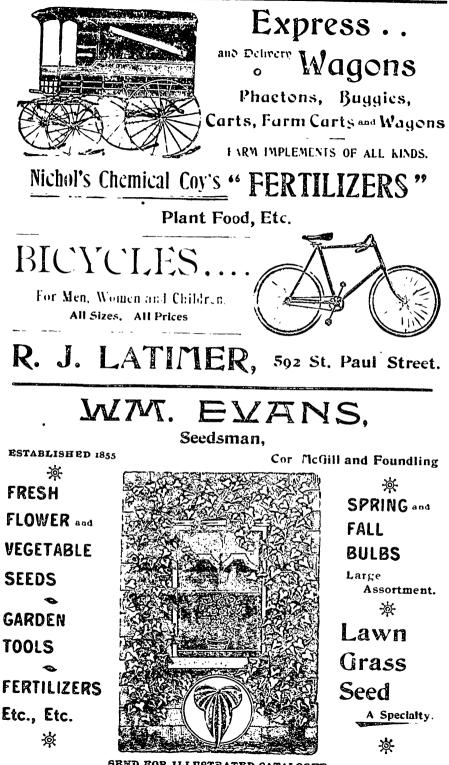
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is now being published, to be completed in 21 parts, at 20 cents per part or \$4.00 for the complete set-payable in advance. This is just one-fifth of its former price. "The Colored Plates in 'Familiar Wild Flowers' are exquisitely beautiful; they are more like finished paintings than print,"-*Gardener's Magazine*. "This is a charming work. The lover of wild flowers will be sure to add it to his store. The colored illustrations are *perfectly true* to nature, and are in the highest sense "things of beauty,""-*Irish Times*.

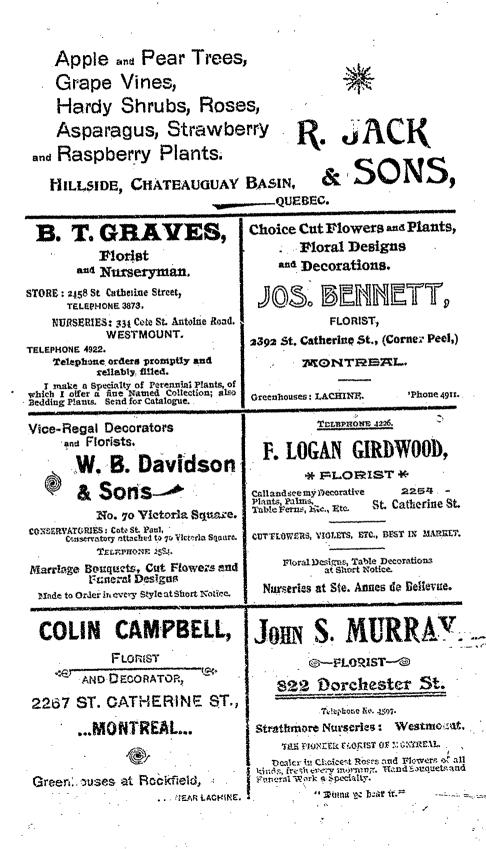


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