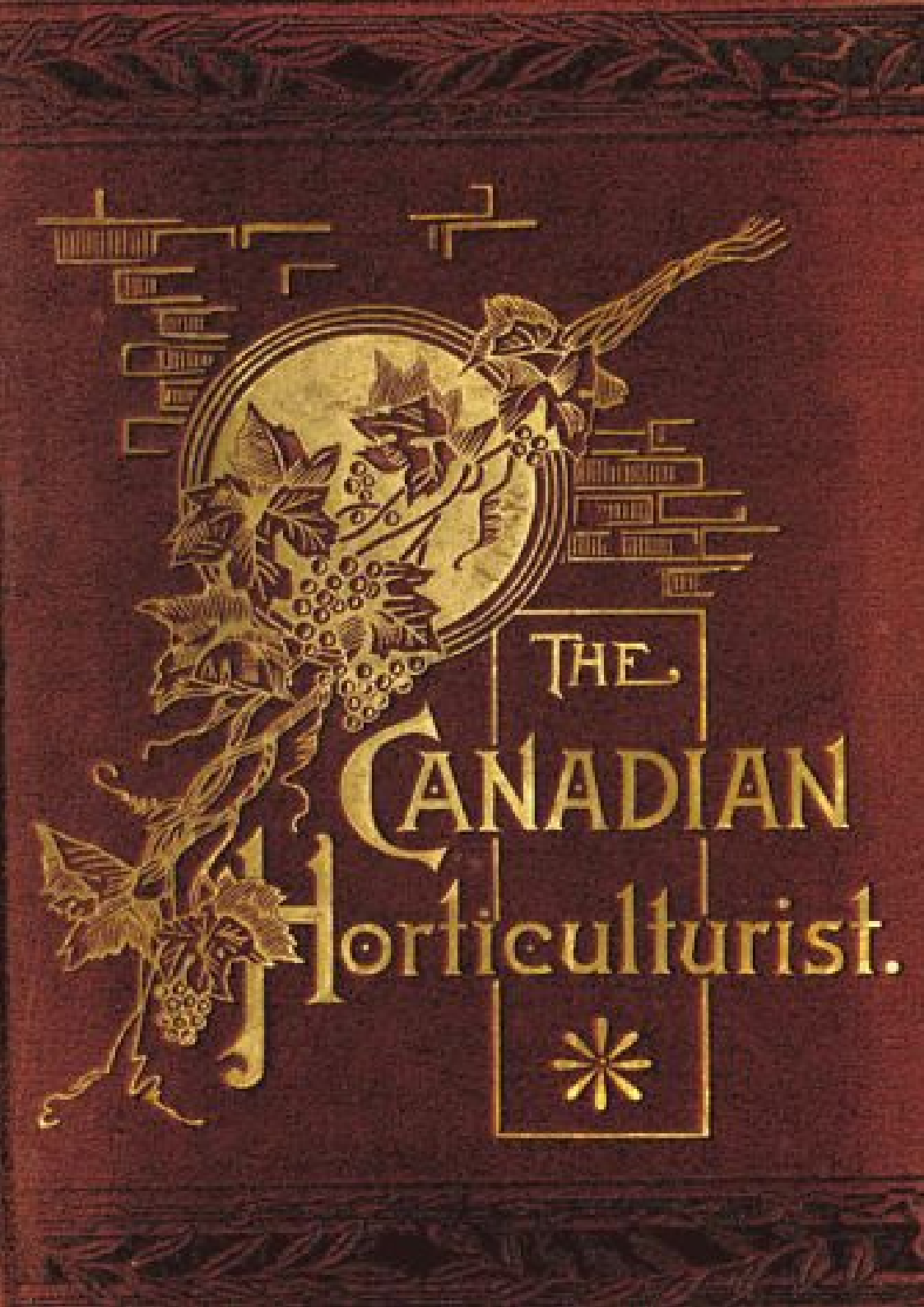
THE
CANADIAN
Horticulturist.

Title: The Canadian Horticulturist, Volume 8, Issue 6
Date of first publication: 1885
Author: D. W. (Delos White) Beadle (editor)
Date first posted: Mar. 23, 2019
Date last updated: Mar. 23, 2019
Faded Page eBook #20190350

This eBook was produced by: David Edwards, David T. Jones, Cindy Beyer & the online Distributed Proofreaders Canada team at https://www.pgdpcanada.net

Vol. 8, No. 6

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Its showy flowers are white, slightly tinged with violet and dotted with purple and violet in the throat.
See Appleton's Am. Cyclopaedia, vol. IV. pg. 98-99.

PAINTED FOR THE CANADIAN HORTICULTURIST.

THE

Canadian Horticulturist.

VOL. VIII.] JUNE, 1885. [No. 6.

THE CATALPA.

The great object which the Directors have in view in giving, without charge, to each subscriber to the *Canadian Horticulturist* the choice of certain trees or plants, is that those things may be tested in different parts of the country, and in this way their ability to endure the climate, their adaptation to the various soils, and their value to us as Canadians may become more speedily known. An impression seems to exist in the minds of some that these things are a sort of bonus given to them for subscribing to the magazine. We desire to correct this impression, and to have our readers understand that these things are given not so much to benefit the recipient as to benefit the entire community. Often times they may greatly benefit the recipient, but even when the article planted proves to be utterly valueless, owing to the fact which is in this way ascertained that it is unsuited to our climate, or to the exposure in a certain part of the country; the knowledge of that fact, if it be only communicated, is of immense value to others, saving them from serious disappointment and loss. For this reason the Directors have made it a condition of receiving these articles that the person who gets them shall in due time communicate to the *Canadian Horticulturist*, for the benefit of all, the results of his experience therewith, whether of success or failure.

For this reason in a very especial manner have the Directors offered the hardy Catalpa to our subscribers this spring. The reports that have come to them of its great value, both as a timber and an ornamental tree, have led them to believe that it may be valuable in a large part, if not in all parts of this Province. Letters have been received from subscribers asking if it would be hardy enough to thrive in their locality; if so they would select the Catalpa to be sent them. If the Directors knew that this tree was sufficiently hardy, and in all respects suited to the soil and climate of all parts of Ontario, there would have been no occasion for testing it, and it would not have been offered.

It is said of this variety of the Catalpa that it is remarkably hardy, much more hardy than the variety which has been to some extent planted in Canada as an ornamental tree, samples of which are to be seen in Hamilton and other places where the climate is not more severe than in that city. As a tree for timber plantations it is thought by many to be unrivalled, because of its rapid growth, its adaptation to almost all soils and situations, its wide range of latitude, and its extraordinary success on the bleak prairies of the North-west.

It is also stated that it bears transplantation unusually well, suffering very little check therefrom, and very rarely failing to grow; that it is possessed of great vitality, and is almost

wholly exempt from the attacks of insects and of diseases. The wood is said to be more lasting than cedar when used for posts, railroad ties, or other purposes where it is exposed to changes in moisture and temperature; and is also said to be capable of receiving a high polish, and to have a beautiful grain, which qualities make it a desirable wood for fine inside finishing of dwellings and for various articles of furniture. The tree is stated to have a very handsome and stately appearance, and in the early summer to yield a profusion of large, showy, sweet-scented flowers of unrivalled beauty, thus making it a very desirable ornamental tree.

If our readers will turn to the Report of the Fruit Growers' Association for 1882, at page 207, they will there find that Mr. Suel Foster, of Iowa, states that a tree of this variety of the Catalpa raised by him, and which had been three times transplanted, was cut down when twenty-two years old and found to measure fourteen inches in diameter. He had a writing desk made from it which he mentions as being very beautiful. Trees six years from the seed measured six to nine inches in diameter, and twenty to twenty-eight feet in height. We also commend to their attention the article in the same report by the late Dr. Warder, pages 264 and 265, from which it will be seen that large plantations of this Catalpa are being made by railway corporations, because the timber of this tree is considered by them to be worth three times as much as the best white oak for ties.

Of the suitableness of this tree for ornamental planting our readers will be able to form an opinion from the colored plate which we have had prepared expressly for this number. The flowers are succeeded by long, pendent seed pods, a sample of which is shewn at the foot of the plate.

If this variety of the Catalpa should prove to be adapted to general cultivation in any considerable part of this Province, the Directors will have done a work in calling attention to this tree which should earn for them the lasting gratitude of every citizen of Ontario. As to the probability of our being able to grow it successfully, see the letter of the Rev. L. H. Kirkley in the April number, page 80.

CORRECTION.
DEMPSEY'S SEEDLING GRAPE.

The seedling grape referred to by Mr. Pattison on page 114, May Number, is Mr. P. C. Dempsey's Seedling, Number 5, not 25. This will explain the discrepancy.

EASY LESSONS IN BOTANY.

BY H. B. SPOTTON, BARRIE.

LESSON II.

We are now ready to look at the flowers. But before going minutely into the structure of any one blossom, we may learn something from a general glance at the flowering portion of each of the whole five specimens. Take the Buttercup first. Do you see that the flowers are *at the ends* of the stem and branches, and that there is only one blossom on each such end? How is it in Wallflower? The blossoms, you observe, have the same situation; they are all at the tops of the branches. But there is at the same time a marked difference between the flowering of this plant and that of Buttercup, which you doubtless discover at once. Wallflower has its blossoms *in clusters*; and while some of the lower ones have probably withered away, there are others in full

bloom, and others nearer the top as yet only in bud. What about Hepatica? The flowers seem to be at the ends of stems, one on each stem, as in Buttercup; only, curiously enough, these flowering stems appear to be without leaves. In Dandelion, we seem to have the same arrangement as in Hepatica. The Dandelion, however, will be the subject of special examination by and bye. In Geranium, the blossoms are in clusters, each blossom at the end of a little stalk of its own, and the whole of each cluster borne on the end of a much stouter stalk which *springs from the side of the stem*.

Now let us sum up all this; but first of all let it be understood that we shall use the word *inflorescence* to mean the *mode of flowering* observed in any plant. So far as we can tell, then, from the five plants before us, blossoms are produced either *in clusters* of some kind, or *singly*, and they are produced either *at the ends* of stems and branches, or *on the sides* of the stems. If produced singly, whether at the ends or on the sides of the stem, we shall say the inflorescence is *solitary*. If produced in clusters, then the name to be given will depend on how the cluster is formed. If you put Wallflower and Geranium side by side, you will see that the flower-clusters are not at all the same. In Geranium, the little stalks which bear the separate blossoms are bunched together, and their lower ends are all joined to the upper end of the stout stalk which carries the cluster; but in Wallflower the little stalks rise one above another from the sides of the stout one. As we go on, we shall find a great many other sorts of clusters, and in good time we shall learn the proper name to apply to each of them. In the meantime, you may content yourself with noticing, in the case of such flowers as come in your way, whether the inflorescence is solitary or otherwise.

When the flowers (in clusters or solitary) are found at the ends of stems, we shall say that the inflorescence is *terminal*. This is the case in Buttercup, in Wallflower, in Hepatica, and in Dandelion, but not in Geranium. How shall we describe the inflorescence in this and similar plants? In all plants which flower on the sides of the stems, you will find that the blossom (or cluster) begins its growth *in the angle formed by the petiole of a leaf with the stem*. Now the angle on the upper side of a petiole, where it joins the stem, is known as the *axil* of the leaf. So, as all flowers which are not terminal spring from axils, we shall call such inflorescence *axillary*.

Having now gained some general ideas as to the situation of flowers and flower-clusters, let us take a single blossom and see what it consists of. First take a Buttercup. It is clearly made up of a great many pieces, some of one pattern and some of another. Those pieces which are of the same pattern, or type, will be seen to form a circle or group by themselves. In fact, all the parts of the flower are arranged in circles, or *whorls*, as they are called.

Look at the outer whorl of all. Count the pieces in it. There are five. Notice their color. They are green, or nearly so; at all events they are not so bright in color as the whorl next within. Take hold of one of these five pieces and pull it away from the flower. You see it comes off readily without disturbing the other four. This outer whorl we shall call the *calyx*, and each of its five pieces a *sepal*; and because we can remove each sepal without interfering with the others we shall say that the calyx is *polysepalous*.

Pull off all the sepals, and then look at the next whorl. This consists of five bright yellow leaves, and you may notice that the leaves of this second whorl are placed *alternately* with those of the calyx, that is, each of them is not immediately in front of a sepal, but in front of the space between two sepals. As in the calyx, you will find that each leaf of the second whorl is separate from its neighbor, and can be pulled off alone. This whorl of bright-colored leaves is the *corolla*; each of its pieces is a *petal*; and because the petals are separate from each other, the corolla is *polypetalous*.

Now strip off the petals, so as to expose the third whorl. In this the pieces are much more numerous than in the calyx and corolla, and are of a totally different shape. As there are *more than ten* of these pieces we shall not take the trouble to count them, but merely say that they are

numerous. As with the calyx and corolla, each of these pieces of the third pattern grows separately from the others. Take off one, and if you have a magnifying glass of any kind it will help you very much to see how it is made. First there is a slender stalk, then at the top of this a swollen part divided lengthwise by a kind of rib. If the blossom has been open for a day or two, you will find that this swollen top has split open down its outer edges, and that a fine yellow dust is escaping through the slits. The pieces of this third type are called *stamens*; the slender stalk of each is its *filament*; the swollen top is the *anther*; the two parts of the anther, separated by the rib, and containing the yellow dust, are the *anther-cells*; the rib is the *connective*, and the yellow dust is the *pollen*. We shall have more to say about the pollen presently. As the stamens are all separate from each other, and at the same time numerous, we may speak of them as *polyandrous*.

Pull off all the stamens, and we find still left, in the centre of the flower, a number of pieces different in pattern from either sepals, petals, or stamens. As before, however, they are all separate from each other. Remove one, and look at it through your magnifying glass. It is green in color, and the lower part has a swollen appearance, whilst towards the top it gradually tapers away to a hooked point. Very likely you will find some of the pollen from the anthers sticking on this hooked point. Try, with a sharp knife, to split open the lower swollen part. If you succeed, you will discover that it is hollow, and that it contains a little seed-like substance attached to the wall of the cavity by its lower end. Each of these pieces of the fourth sort is a *carpel*; taken all together they make the *pistil* of the flower. The hooked point upon which the pollen sticks is the *stigma*, and the lower swollen part is the *ovary*. The little body in the ovary is called at first the *ovule*; and later on in its history it becomes the *seed*. As the carpels are all separate, we shall say that the pistil is *apocarpous*. When the pistil ripens it becomes the *fruit*.

When we remove all the carpels, there is nothing left of the flower except the small lump upon which all the parts of it grew. This lump is the *receptacle*, and we have examined the blossom of the Buttercup first, because in it *every piece is attached directly to the receptacle*.

The only other points to be observed in this lesson are, that the stalk which holds up a flower-cluster, or a *solitary* flower, is the *peduncle*, while the finer stalks which bear the separate blossoms of a cluster are the *pedicels*; but *leafless* peduncles, such as those of Dandelion and Hepatica, and stemless plants generally, are known as *scapes*.

WHAT THE PEOPLE SAY.

DEAR SIR,—I received my premium, and it is a fine one. I sometimes wish I could make my fellow laboring men test the profit and pleasure of a garden as I have done, there would be less miserable homes, and more preserved tomatoes, currants, gooseberries, rhubarb, raspberries, strawberries, etc., and much less poverty. We wage workers find money for smoke and some for drink, but a dollar for our fruit grower, CAN'T. What fools these mortals be. I live like a prince in the summer.

S. P.

London West, May, 1885.

SPRAYING WITH PARIS GREEN.

I tried the spraying with Paris Green, ¼ lb. to 40 gallons of water, on my orchard of eight thousand apple trees last spring, and believe it had a very good effect.

D. YOUNG, M.D.

Adolphustown, Co. Lennox,
7th April, 1885.

HORTICULTURAL NOTES OF A SOUTHERN TRIP.

BY WM. SAUNDERS, LONDON.

The transition from a temperature below zero, with bitter February winds, to the soft and balmy air of a southern spring, was accomplished with less than three days' travel; and when on the Gulf Coast, approaching New Orleans, the spring flowers were open, the maple trees bursting their buds, the birds singing merrily, and butterflies flitting about enjoying the sunshine. Gigantic magnolias and live oaks were to be seen on every hand, the ground was strewn with clumps of scrub palmetto, and camelias grown to a size never dreamt of in the north, were flowering freely in the gardens. The change was immense, and most agreeable. Having secured a location in the busy "Gate City," the Exposition claimed attention, Horticultural Hall being one of the chief points of attraction.

The grounds around the several buildings were decorated with a series of very large beds of various forms, in which were planted some forty thousand bulbs, chiefly hyacinths and tulips, with smaller beds of jonquils and narcissus. These were contributed by "The General Bulb Co.," of Holland. Notwithstanding that these bulbs had been carefully selected, a large proportion of the flowers were poor, especially the hyacinths and tulips; the jonquils and narcissus were better. The plants seemed to have had too much rain, and the insufficiently drained soil with water in many places but a few inches below the surface, was a condition very unsuitable to successful growth. Beds of Drummond phlox were just coming into flower, and these were not thrifty looking; but the beds of pansies were superb, the plants were vigorous and freely covered with very large and elegantly colored flowers. Mammoth cactuses, brought from Mexico, were placed in prominent positions about the ground; many of them as big as the trunk of a large tree, and from six to eight feet high. About the Horticultural Hall the grounds were very pretty and well kept, but elsewhere they were in a rough and unfinished state, some portions sodded, and others merely ploughed and left in that condition. The intention had evidently been to finish all in proper style, had the necessary funds been available.

There were a number of very interesting trees and shrubs in the collections adjacent to the Hall, a large number of them having been sent from California; and the weather was just such as to tempt one to ramble among them. The following were specially noted, most of which were from San Jose, Cal. Six varieties of olives; a lovely shrub, covered with elegant purple flowers; *Polygala dalmatianum*, *Spartium album* and *Genista europea*, both in bloom; *Ligustrum japonicum*, an attractive shrub, with thick, glossy foliage; *Eriobotrya japonica*, known as the Japanese plum, with very large, curiously plicated leaves; *Raphiolepis indica*, a lovely shrub, with beautiful foliage and small pinkish-white flowers.

Most of your readers are doubtless familiar with the appearance of Horticultural Hall. It is in appearance, and in fact, an immense conservatory, 600 feet long and 194 feet wide; the centre of which is filled with tables decorated with an immense number of varieties of fruit, and the sides filled with collections of growing plants. A large portion of one side is occupied with large circular beds of cactuses, including an immense number of specimens belonging to some 300 species, the greater portion of which is from Mexico. These range in size from an acorn to plants twenty feet high and more than three feet in circumference. Part of the space on the opposite side

is taken up with a tropical greenhouse, 250 feet long and 25 feet wide, in which is an immense assortment of southern plants, especially orchids, of which we counted no less than 850 specimens. These have been sent from all parts of the tropics, twenty or more of the number were in flower, some of the flowers being very brilliant and attractive, others curiously cut, fringed and spotted, and tinted with a variety of hues. There were in addition a number of other rare plants which it is unnecessary here to enumerate; and many objects of general interest, such as coffee trees with the berries on them, tea, cloves, allspice, cinnamon, black pepper and vanilla, all in a growing condition.

After a hasty general survey, the fruits were more carefully inspected. Attracted by the word "Canada," in prominent letters, that quarter was first examined. It was found that there still remained of the collections sent by the writer and our ex-president, Mr. P. C. Dempsey, seventy seven plates of very presentable fruit. It was ascertained that the Canadian fruit had been awarded two first prizes on single varieties, one on Esopus Spitzenburgh, and one on Ribston Pippin; a creditable result when we consider the immense efforts made by all the western States, and the fact that there were some twenty thousand plates of fruit on exhibition. While the apples exhibited in the Canadian collection were very fine and deservedly commended, they were entirely eclipsed by the exhibits from some of the western States. Arkansas carried off the gold medal and $200 for the best collection of 200 varieties. The samples of Arkansas fruit were simply immense, no one accustomed to ordinary displays would have conceived that the varieties exhibited could have been grown so large. Missouri ranked next, and took one gold and four silver medals: Colorado, Kansas and Nebraska had excellent exhibits, and carried off a number of prizes; so also had Michigan and Iowa. Many of the other states sent very good collections, but inferior to those already referred to.

J. Cheal & Sons, of Crawley, England, showed a collection of one hundred varieties of English apples, and Groux & Fils, of France, fifty varieties from that country, but neither of these would compare at all favorably with the Canadian fruit, and were, of course, far behind the western exhibits.

(*To be continued.*)

THE SCAB ON THE APPLE, AND TREE PRUNING.

(*For the Horticulturist.*)

The letter of Mr. S. Cornwall, in the April number, reminds us that the promised report of the committee appointed to experiment by the application of various substances likely to remove or lessen the scab on the apple tree, never came to light; we have had it, however, in instalments from time to time in these pages, from which it appears no cure has yet been found. It appears to me we must first find the cause.

It is encouraging, however, to learn by reports from various sections that the disease seems to be on the decrease, although I am sorry to say such is not my experience.

Were I to speak of all the causes suggested to me, or imagined by myself, it would fill your next number with matter very uninteresting to the reader.

Too much manure, has often been suggested as the cause, although one man (a successful fruit grower, too) assured me if I would dig a cart load of good manure under one tree, it would be free from spots the following year. Don't let any reader expect any such result.

I have thought that pruning may have something to do with it. I have pruned my orchard annually in June, seldom having occasion to cut off large limbs, but in endeavoring to preserve

an open top, have cut off large quantities of small branches at every pruning. Have I not erred in over-pruning? From various sources I have collected the following:

"We prune to give symmetrical shape, to bring into bearing, improve the quality of fruit, impart vigor, &c. If a tree stands alone, is in health, and its roots are uninjured, but little pruning is required. *Many orchards require pruning because too much pruning has been done.* Every large limb cut off is a blow at the life of a tree. The leaves convert the food gathered by the roots into material for wood and fruit. If too much top is cut away, the leaves cannot perform this duty, and the roots die. Avoid pruning that will let the sun shine on the limbs or the body of the tree."

The *Gardeners' Monthly* says: "The pruning knife often injures as much as it benefits, and hence arises two schools: those who prune on all occasions, and those who prune not at all. Our late president, Rev. Dr. Burnet, says (*Horticulturist, vol. 2, p. 139*): Very few varieties of apple trees require much pruning after the early stages of growth."

In that excellent work, the *Canadian Fruit, Flower and Kitchen Gardener*, edited by our worthy secretary, at page 18, we read: "Every fruit tree grown in the open orchard or garden as a common standard, should be allowed to take its natural form, the whole efforts of the pruner, going no further than to take out all weak and crowded branches, those which are filling uselessly the interior of the tree, where their leaves cannot be duly exposed to the light and, sun, or those which interfere with the growth of others. Summer pruning tends to lessen the vigour of a tree."

From the fact that I have every year cut off a large quantity of wood, when all of the above remarks indicate that very few trees require much pruning when fairly started, I begin to think I have over-pruned, losing time, working to the detriment of my trees, and possibly of the fruit. Whether or not it may have been the cause of the scab being worse on my orchard than on surrounding ones, I am not prepared to say; perhaps our Editor or some of our readers will favor us with their opinion. Another idea strikes me. May not over-cultivation have something to do with it? The following I think I got from the *Rural New Yorker*:

"Two fruit-growers once procured the same variety of pears, from the same nursery, and planted the trees at the same time. They were cultivated, however, quite differently. One of the growers yearly cultivated in his orchard garden crops, with occasionally corn, applying liberal dressings of manure, under which treatment the trees grew rapidly, and not only improved in appearance and color, but bore early and gave large yields. His neighbor did not use his orchard for any other purpose than the growing of grass, which was occasionally mowed, plowed and seeded to grass again. The orchard that was kept in grass has on it to-day trees that are only half the size of those in the orchard that was cultivated with hoed crops. It has never borne as well, nor has it equalled it in appearance. The blight, however, has nearly destroyed the orchard that looked the most promising, while the slow growing trees are as sound as when first set out, although both orchards are very near each other. The pear orchard that gave its owner such heavy yields is nearly destroyed, but the other seems likely to last several years, not a tree being affected with the blight."

Just as that first man did with his pear trees I did with my apples, and under high cultivation my orchard grew to be the admiration of the neighborhood. As the Editor tells us of his "Rowan Tree,"

"There was nae sic bonnie trees
In a' the countrie side,"

But after bearing heavily for a few years, they were, and are to-day, ruined with the scab.

A part of this very same orchard I sold some years ago, and its new owner, very much I

thought to the detriment of the trees, seeded it down to grass, but the results have been in favor of non-cultivation, the fruit since gathered on the portion seeded down has not been nearly so much affected with the scab as the cultivated part.

But we are getting tired of the subject; we'll jump the fence, and without fear of our Editor being exalted above measure, add another word of congratulation to the many at the success of our little monthly.

He (Friend Beadle) comes out again in his usual happy style. Who would have thought he could bring so much of the beautiful and sentimental out of the old Snow Ball? But it's in him to cherish thoughts of *sweet long, long ago*, and such touching remembrances give to his letters an interest that will speak long after his pen has ceased to write. May which day be in the very far future.

The index to contents on the last page of the number is a decided improvement.

It is encouraging to find so many of our members giving us the results of their experience. More might do so with benefit to themselves and us. He who makes two blades of grass grow where one did before is a public benefactor, provided that they be in kind good, and that he tells us how to do it.

JOHN CROIL.

Aultsville, April, 1885.

SOME MARKET STRAWBERRIES.

BY T. C. ROBINSON, OWEN SOUND.

Wilson.—This is the most famous Strawberry yet seen in America, and without a doubt it has well deserved its fame.

Probably if it had not been originated till the present time it would win very little attention in competition with the improved varieties lately introduced. But coming when it did with no other large, good shipping and very productive variety then in existence, its sudden popularity is not to be wondered at. No fruit perhaps has received more opposition, not to say abuse. Its too dark color when over ripe, and especially, its *magnificent tartness*, furnished many a writer with matter for jest. But the men who don't *work for fun*, but *grow berries for money* finding the Wilson to ship well and give more dollars to the acre, with less labor than the high toned sorts demanded, stuck so close to the Wilson, that to this day there are probably ten times as many Wilson strawberries slipping annually down chuckling Canadian throats than there are of all other varieties combined. True it is sour—don't let us attempt to deny such a self-evident fact. And in spite of the courageous assurances of some men that they like sour berries, let us stick to it that it is too sour to just suit the public. And it is often small, too small with ordinary treatment. But it is pretty, it does ship well, the people do buy it fast, when they cannot get anything better, (and they generally can't) and it is immensely productive, where it succeeds.

But it does not succeed in many places. In the States the plant has become so feeble from the red fungus called rust (sun scorching) in many localities that it has already been largely superseded in many markets. Even in Canada, on sandy soil near Lake Ontario I have seen it so feeble that some plants set out for forming matted rows had grown unrestrictedly the summer through without sending out more than two or three runners from each plant in the row. I think this failure arises largely from propagating from exhausted old plants, and also from lack of understanding the kind of soil it is suited to. Most market growers have planted on sandy land perhaps because it is so easily worked. But if they would try it on good clay loam and mulch it to

keep the roots from heaving out in winter, they would probably be amazed at the difference.

But making allowance for all this, and for its almost youthful vigor and health in the northern and cooler districts in Canada, we must yet expect it to fail at no distant date, and look alive for something to supply its place.

Let us frankly confess that for good clay loam we have tested nothing yet that will just fill its place *as a shipping berry*; we have other exceedingly productive sorts, but they are not firm enough: we have other varieties that are firm enough but they are not sufficiently productive with like culture.

But on sandy land the case is different.

The Crescent.—(first known as *Crescent Seedling*, "*Parmelee's Crescent Seedling*" *&c.*) is more on such light soils than the Wilson ever was. The way in which the wiry little plants creep swiftly over an ugly sand bank under the hot sun, spending as little sap as possible on extra leaves and laying up all they can in fruit buds for next year's crop is sure to delight the fruit grower who has gazed in despair at his long cherished but wilting Wilsons. Why, I have seen the Crescent fairly wilting in the evenings of a long drought, the leaves turning bottom upwards as if the hoe had run under them, but the next morning they were briskly upright, ripening their serried clusters with only the dew and cool night hours for refreshment.

The berry does not seem as firm as Wilson, yet it ships uncommonly well, and for sandy soils referred to where it is at its firmest, there will probably be little difference observed by fruit dealers in a season's shipment; and if you go to the market stand to buy a quart you will doubtless have them offered you as Wilsons, only fresher and better than other people's Wilsons; "don't you see they are so much brighter and handsomer."

The Crescent is truly a beautiful berry, and if not any larger than Wilson you will be abundantly satisfied with the extra yield from such light land. "Quality?" Oh, don't ask me! We are talking about *market* berries, and what does the public know about quality? when only low quality is offered them (?) "But the Wilson has quality!" Yes, truly: when the Wilson hangs on the plant *till the seeds turn yellow*, it is excellent flavour and you just notice the acid without being annoyed by it—*it's good*. But when it is ripe and good like that it is too dark—too *blackly* red—to sell well; moreover it is then *too soft* to ship well.

When it is in condition to ship well, that is when it is *red* but *not ripe*, it is too sour for the grower to eat, or the pickers. Now the Crescent may be picked and marketed at both those stages of ripeness or unripeness without much difference observable in appearance, but when first red it is not nearly so sour as Wilson, somewhat flavorless perhaps, but pleases the people as well or better than the severely acid Wilson of the same age; and when dead ripe it is quite palatable, though without the Wilson's high flavour. Do you ask how it behaves on clayey loams? An immense bearer, but more insipid and less firm than on sand: well enough to try if Wilson fails, but where, as with us, by clean culture with runners kept off the Wilson gives nearly a quart to the plant, you don't need a better shipping berry.

The Crescent blossoms are imperfect. In a dry season the small quantity of pollen they frequently contain often proves sufficient for a good crop, but it is safer to plant Wilson or some other pollen bearing variety every 8th or 10th row running north or south. It is the hardiest strawberry plant I know of. But a market berry does not absolutely require great firmness. With the advance and spread of Horticulture each city and town begins to have a supply grown near at hand, and there are many berries quite firm enough to keep in good condition 48 hours after picking if not rattled about at station or wharf.

The Bidwell—is one of the best of these, it will even ship 100 miles at a pinch. But pick it for sale next day and you have a sure thing for profit, providing your soil and culture suit it. Not that I think it hard to suit in soil, it takes hold and grows well; better than that, it grows sublimely wherever I give it a chance. But if you will have a crop I think you must keep the runners off. I

think it is (if the editor will pardon the term) the best intentioned variety in the Catalogues, setting always about twice as many berries as it can possibly mature in the matted row. But give it a chance and then see! In the spring of ’83 I put on a quarter of an acre of land about 5,000 Bidwell setting them a foot apart in rows two feet apart. The runners were kept off, the ground was mulched all over with a little over an inch deep of well-rotted manure. In the summer of ’84 they shaded the whole ground with foliage, the leaves interlacing even from row to row, and they set a larger crop of fruit than I ever saw before. Then a miserable fly punctured the blossom stem about half-an-inch behind the blossom, at such a rate that nearly half the blossoms seemed to be on the ground and I feared for the loss of the crop: meanwhile a severe drought had commenced, so that by the time the berries began to ripen no rain had fallen for about a month, and yet they ripened up fine large fruit during the remaining nearly three weeks of that dry spell, yielding me some 2,000 quarts from that quarter acre. When I add that the land was sandy loam, which the Bidwell is not supposed to like, and that it had been manured to only about half the extent that I think a crop of strawberries deserves, I think I have established my right to prize this variety.

It does not ripen evenly, showing a white tip on many of the berries and many of the largest samples are deformed, but it is one of the largest of strawberries, the quality is excellent, it is generally glossy and handsome, and customers will even get to ask for it by the white tip when they get to know its excellence.

The Manchester—is perhaps the most popular of the newer market varieties. In vigor of growth with me it closely approaches the Bidwell and in productiveness it is probably not excelled by any except the Crescent on sandy land, while on clay loam I think it will bear more. The berry is remarkably large and handsome, and exhibits a rich gloss that is remarkably attractive.

It seems to be a little firmer than Bidwell, but its value will chiefly be found in a near market, and for such a market I would rather have it than any other variety I know, for its season of ripening. It is medium to late, and in conjunction with Crescent, which is very early, would probably give the greatest possible profit in strawberries from sandy land provided a good pollen bearing sort be planted near, for its blossoms are more decidedly pistillate than those of Crescent. I have seen it doing exceedingly well on rather stiff clay, in matted rows (doing well, that is, for *matted rows*), so that I consider it about the safest variety known for all soils. I wish the color were deeper: in a wet season many berries will appear to be on the green side, but the people will try them any way, and the flavor which is really very good, will soon widen the demand.

Windsor Chief.—I think this is superseded by Manchester. It is no bigger, not as firm, no more productive, and so abominably sour! Lots of people will eat it, but it almost screws my mouth up to see them do it. It is probably hardier and somewhat later than Manchester, and so may be more reliable for localities where strawberries often get winter-killed, or the crop blasted by a late frost. It certainly is immensely productive; but I, for one, am quite ready to kick it out, in good strawberry regions, to make room for Manchester.

James Vick.—I have not fully tested this. It certainly is a fine vigorous grower, appears very hardy, and is astonishingly productive. I don’t think much of the quality, about like Crescent or Wilson, but that does not make so much difference in a market berry, as before intimated. It certainly is very handsome, and appears to me rather firmer than even Wilson. Is it large enough to the last? is the one remaining question upon which I require to be satisfied before setting it out for market by wholesale. In the matted row I think it likely to prove too small, but with runners cut I expect considerable things from what I have seen of it.

Sharpless.—People seem bound to make a market berry of this after all. Put it on light land, give it just enough manure to tantalize it, cut the runners now and then, and you will have some very fine berries which the birds and casual visitors will reduce to about one-tenth the number of quarts that you would get from Wilson or Crescent on the same ground. It’s one of the easiest

berries to lose money on that I have tried.

But let the owner of a rich loamy lot near to a city or large town set it out eighteen inches apart in the row, rows three feet apart, mulch the whole ground with well-rotted manure and promptly repress all weeds and runners, and I should expect him to average at least a pint per plant under average conditions of climate. Will that pay?

The blossom of the Sharpless seems tender, often blasting with a slight late spring frost that varieties like Crescent, with hardier blossoms, would escape. But it is rather a late variety so that the frosts are generally over before it is out in full blossom.

Of newer varieties.—Cornelia, Atlantic, Lacon, &c. I must acquire more experience before speaking positively. Have any "*Horticulturist*" readers tested them?

EDIBLE MUSHROOMS.

In cutting out, pulling off edible mushrooms which are more commonly grown by what is called a brick of spawn, but more properly named myosilium, the mushroom is only the flower, the plant is under ground, care should be taken to cover up at once with earth the detached part of the stem so as to prevent the fungus fly from depositing its eggs, the grubs of which will speedily destroy the whole plant. This *modus operandi* is well understood in some parts of Europe where mushrooms form an essential part of food.

R.

Berlin, 6th April, 1885.

THE JUCUNDA STRAWBERRY—HOW TO GROW IT.

The Jucunda is the grandest berry that ever appeared in our markets. It has always brought the highest price, and large quantities of other varieties have been sold for it. It has been introduced under new names, as Abraham Lincoln, Field's Excelsior, &c. One grower sold over 300 bushels from a day's picking, at $16 a bushel. It has brought a dollar a pint—ten cents a berry. Notwithstanding, it is now rarely found in market, and but few raise it for home use. This is because it requires more skill and care in its culture than the average grower can give.

It originated in Europe, and the plant is not quite as vigorous and hardy as our native varieties. The young plants are always small and their roots seem to be too tender to resist much freezing and thawing, for this variety is among the first to get heaved out. Its blossoms are perfect, and it continues in bearing a long time. The fruit is very large, roundish, conical, and quite uniform in shape and size; color, very bright glossy scarlet; flesh, firm and sweet with a peculiar musky flavour that nearly every one enjoys.

The idea prevails that the Jucunda can be grown only on heavy soil; but this is a mistake. I have had it in great perfection on light sand. We might as well learn first as last that plants do not live on the soil, but on the plant food contained in it, and this food can only be taken up in solution, and when the air can circulate in the soil about the roots. This is the reason why stirring the soil promotes growth, and why florists use unglazed pots and soil that remains porous. When a crust is allowed to form on the surface plants make but little growth, and if the roots remain any length of time under water growth ceases entirely and death will follow. Keeping the surface

loose with a mulch is equivalent to stirring the soil.

The skill and care required to grow the Jucunda to perfection will answer perfectly for any other variety. The following method is adapted to those who are willing to give extra culture for the greatest perfection in fruit:—

The soil should be well drained, deep and rich. If it slopes to the east or north, so much the better; but in any event it should be sheltered on the west, for the foliage of this variety cannot endure our hot, drying winds. This is true of many others. I have seen a patch rusted everywhere except for a short distance on the east side of a fence.

As early in the spring as the ground is dry enough to work, clear it of all rubbish and stir it thoroughly to the depth of five or six inches; after which it should be plowed or spaded to twice that depth. If an abundance of old, well-decomposed stable manure is at hand spread over the surface a liberal allowance, from two to four inches. In the absence of this a bushel of unleached wood ashes and ten pounds of bone dust to the square rod will answer. This should be well worked into the soil and the surface left smooth. It is now ready for planting. Such liberal manuring seems out of all proportion to the amount of plant food removed from the soil by a crop of strawberries, but it is not removed from the soil. The strawberry plant needs plenty of food to build it up to a condition to produce an abundance of fruit.

The roots, stem and leaves are made up of rich material. During the season of growth a large amount of food is stored up in the crown for the production of seed (fruit) just as it is in an onion or a parsnip; but the strawberry plant is perennial and is not entirely exhausted after producing a single crop of fruit. This is the reason why a strawberry patch, when plowed under, furnishes so much food for the following crop. It is almost like plowing under a crop of clover. Even insects have learned that the strawberry plant is rich, for the larvae of no less than five of them feed on the roots and crown, while the foliage has a large number of enemies.

Select young plants and see that their roots are not exposed to drying winds or frost while out of the ground. Remove all dead leaves and runners and shorten the roots to three inches or less. Wash them thoroughly lest the larva of the crown-borer or strawberry-root worm be carried to the new bed. Put the plants in a pail with the roots covered with water, taking out one at a time to plant. Set in rows four feet apart, and twelve inches apart in the row, leaving the crown level with the surface and the earth pressed firmly against the roots.

If in a garden where the work is done by hand, the space between the rows might be occupied by some early crop that would not interfere with the plants, as dwarf peas.

Soon after the plants are set blossoms will appear, which should be cut off at once before they exhaust the plant. A little later in the season runners will start, and they too must be cut off. During all this time the ground must be thoroughly stirred, never allowing a single weed to share the food and moisture that is designed for the plants.

About the first of July strong runners will be starting out in abundance. Select two of the best from each plant and allow them to produce one young plant each, cutting off all the other runners through the season. Place these young plants on each side of the old one, and nine inches from the row. This will leave thirty inches for a path. Cultivation must be kept up all summer, and the earth should not be drawn to the plants nor from them. If weeds be allowed among the plants, or if runners remain until a foot or more in length the best results can not be obtained.

Early in the fall, when rain is more frequent, and the surface of the soil is cool and moist, all deep cultivation should be discontinued so as to give the roots a chance to occupy the soil near the surface. These surface roots are very important and should not be injured. They prevent the plant from being thrown out by freezing and thawing, and have much to do in the production of fruit. If they be injured in any way the plant will at once commence to make repairs, and the work of storing up food for the next crop will be suspended for a time.

At the beginning of winter the bed—including the path—must be covered with straw or any

light litter that will shade the ground. About two inches will be sufficient. As soon as growth commences remove this from directly over the plants, leaving it between. Give no cultivation in the spring. When the fruit is gathered cut off the leaves, stir up the mulch, and burn over the bed on a dry day. In a few days the plants will start again when you will have a new bed as it was at the end of the first summer, and it will need the same care.

By this method every want of the strawberry is supplied.

M. CRAWFORD,

Cuyahoga Falls, O.

BIGNONIA RADICANS.

TO THE EDITOR OF THE CANADIAN HORTICULTURIST.

DEAR SIR,—The Bignonia is quite hardy in this locality. A rapid grower. The foliage very beautiful. A profuse bloomer, and it is very easily propagated.

MRS. H. C. GWYN.

Dundas.

THE BLACK CURRANT.

A SUGGESTION.

(*For the Canadian Horticulturist.*)

There are many who think that black currants do not pay. True they do not pay some, because they are grown on dry sandy land. Now the black currant wants a good rich loam to do well and pay the cultivator. It is time and money wasted to try to grow them successfully on dry sandy soil. The black currant is a gross feeder, and should be liberally supplied with all kinds of manure, and the stronger the better. It is well known that the finest fruit is produced on the wood of last year's growth, and I suggest that we should plant closer—plant at three feet apart every way in lines at right angles to each other. An acre will then take say 4,840 plants. Now cut down yearly to three or four or more buds every alternate tree, as shown in this diagram:—

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The asterisks represent the trees intended to produce fruit this year, and the dots those which bore last year, and which have been cut down to produce strong growth for bearing next year. As soon as those cut down have started a growth of two or three inches they should be looked over; never allow a shoot more than will be required. It will be seen my motive for cutting down every alternate tree is to produce a succession of strong young wood and get fruit of better quality than could be had otherwise. Only grow the finest varieties; discard all inferior sorts. I have raised a very fine lot from selected seed; but I know of nothing easier to propagate than the currants from cuttings. So if an acre will take 4,840 plants, half that number, 2,420, will be in fruit yearly, and fruit of the finest possible kind. Some of our experienced small fruit-growers may have carried out this suggestion, and if so would they please tell us with what result in this journal.

T. A. H.

Medora, Muskoka.

MISCELLANEOUS TOPICS.

BY A. HOOD, BARRIE.

WHAT SOILS DO APPLES PREFER?

It has often occurred to me that in planting fruit trees one very essential condition to success has received less attention than it deserves—I mean the kind of soil in which the different varieties are planted; and I don't think it is as well known as it ought to be that most varieties have some special choice, some particular kind of soil to which they are best adapted; and certain conditions of such soil as to wet or dry subsoils that are best suited to their requirements. Wet subsoils! Surely there is no fruit tree that delights in a wet subsoil!! To which I would say I am not quite sure about that; but there is one thing I am sure about, and that is, that if a man found himself so situated that he had no convenient place for his orchard that had a dry subsoil, he would give something to know what trees were best suited to a wet one. We live and learn, or at least we ought to do so, and he that lives and does not learn had better keep out of the fruit growing business. I formerly thought that all garden vegetables would do best in a light friable soil; but now if I wanted to grow parsnips I would select the stiffest clay I could find. I was once told by a late President of the F.G.A. that he thought a soil could scarcely be too light for apples, and he may have been right; but I think now that such a rule would not apply to all apples. I have been led into these remarks by a little experience I have had with the Gravenstein, which is, I think, the best apple we have of its own particular season, either for eating or cooking. I have a few trees in my orchard, a rather light but good garden soil with porous subsoil, that are not making much progress—not, in fact, doing quite as well as other kinds amongst which they are growing; while at the same time my brother has a young orchard about a mile away on such a stiff wet clay that his plum trees, of which there were about 80, are all dead or dying, and most of the apple trees following their example, and yet a few Gravensteins under sod are doing well and bearing crops every year. Has any other member had any experience of this kind with any variety? If so it would be useful to have those experiences recorded, and I hope the next man who writes a book on fruit growing will collect such records and use them.

CARBOLIC ACID FOR ROOT-DESTROYING INSECTS.

In the early part of last summer I was passing by the house of a gentleman in this town, and he called me in to see his young wallflowers which to his great annoyance were dying off rapidly, without his being able to arrest the destruction. He pulled up sickly looking plants in my presence one after another, and at the rate they were going it seemed certain that it would not be long till the last of them was gone; and every one of them had lost all its fine fibrous roots. This convinced me that the trouble was not what is called damping off, because in that case the stalk

or stem appears as if eaten partly through just at the surface of the soil. It must then, I thought, be insects possibly so minute as to escape observation, and I recommended my friend to try a weak solution of carbolic acid, scarcely expecting when I did so that he would follow my advice, knowing as a general thing that men would rather "advise ten others what should be done than be one of the ten to follow their own advising;" but my friend loved his plants, and was anxious to save them, so he watered them with the carbolic solution—I think he said two teaspoons-full to a pail of water—and did not lose a single plant after the application. That little experiment was worth a great deal to him, and it might be worth something to some readers of the *Horticulturist*, and should the acid prove equally efficacious against the phyloxera, who can estimate its value to cultivators of the vine?

FLAVOR OF GRAPES.

Last year was a new experience to me in regard to the qualities and flavors of different varieties of grapes—an experience that will make me more than ever cautious in receiving opinions and descriptions of such even from the pens of those who may be considered judges of such matters; and with respect to earliness I regard no man's opinion as conclusive, for admitting that the particular kind of soil on which a vine is planted may make a few days' difference in the time of ripening, thus making an early variety appear a later one, and *vice versa*, I find that the particular variety that is earliest with me one year is not certain to be so the next, and the one that I judge to be the best in quality one season is not certain to retain its superiority at the end of another year. I have usually regarded Rogers' No. 9 as A 1, and No. 15 and Delaware as coming next, Concord as just passable, and Clinton as scarcely eatable; but last season upset this classification altogether. Nos. 9 and 15 failed to sustain their reputation, and Clinton and Concord came to the front surprisingly; even the Champion became eatable, Clinton was preferred to No. 15 for eating out of hand, and Concord was pronounced by all who compared them as decidedly the best. I found no change in the Delaware, but No. 15 was watery and flavorless, and certainly not up to the usual mark. The Concord, I find, must be fully ripened before it is in perfection, but when in that condition it certainly ranks among the best, and as compared with it Rogers' No. 4 must take a back seat. All this, of course, is as they are grown here, and may not hold good elsewhere.

QUALITY OF WINE.

It is to be expected that such variations in the quality of grapes would make a corresponding change in the quality of wine as made in different seasons, as I presume is the case in all wine-producing countries; but that does not alter the fact that some soils and some atmospherical or climatic conditions are more favorable for the production of choice qualities than others. We are here on the northern limit—perhaps beyond the limit—of successful grape-growing. Are we also beyond the limit of successful wine-making?

I remember some years ago reading an article from the pen of Mr. De Courtenay, then engaged in wine-making at Cooksville, in which he argued that the climate was more favorable for that purpose north of 45 degrees than south of that latitude; and I think the reasons were that in the warmer climate the fruit contained too much sugar, and I think he said fermentation was apt to proceed too far at the expense of the bouquet. I have made small quantities the last two

seasons with such success as to support Mr. De Courtenay's contention, as well as to be a very agreeable surprise to myself; and as to the quality, all who have tasted those two vintages are unanimous in their praise. They may not, of course, be equal to the best wines produced in the Old World, though certainly superior to those sold here as such.

Don't let me alarm the temperance community, for all the wines I have sold have been for medicinal or sacramental purposes; and Scott Act or no Scott Act, for such purposes there will always be a demand.

LABELS.

It is a convenience in the farmer's garden, and an absolute necessity in the nursery, experimental plot, or seed garden that each variety of plant, fruit, or flower be legibly and correctly labelled in such a manner that one can tell at a glance what the variety is. Yet this point is very often neglected, and as a consequence, much bother follows, to say nothing of the setting or planting of stock that is impure or incorrect in name.

As I experiment largely with various fruits and vegetables, one item of which is a collection embracing several hundred varieties of potatoes, I am obliged to systematize the labeling of them, and adopt a mode by which a mistake is practically impossible. In sowing seeds in hotbeds or the garden, it is a matter of convenience many times to have the label show in a concise manner the date of planting, name of variety, and who the stock seed was obtained of—whether home-grown or not. For this purpose I mark like the following sketch, which shows that the Little Gem Peas, stock seed of which was obtained of Wm. Rennie, was sowed April 15th. When planting stock is home-grown, the word "home" may be substituted for the name of the seedsman.

Little Gem Pea.
Rennie. 4/15

I use for labeling potatoes, or any crop of annual planting, pieces of pine or cedar 15 inches long, 1 inch wide, and ¼ inch thick. These I mark with a common black lead-pencil of good quality, the point being left blunt so as to make a firm, legible mark. This will last one season at least if carefully done, and is more durable than any special preparation or garden pencil, either English or American, that I have yet tried. Cedar labels hold penciling the longest, I think; but pine presents a smoother surface, and usually holds sufficiently well for one season. Of course a tabulated memoranda of dates of planting, etc., is necessary; but this plan is a convenience, and at any rate forms a memorandum in itself.

For the fruit garden I use one-inch pine strips two feet long, planed on one side, and stencil on the name of variety in India ink, using a set of half-inch letters, which may be cut in small squares of brass by any stencil-cutter. After marking, the label is brushed over with boiled linseed oil. I have labels of this kind that have stood the vicissitudes and changes of our northern climate for years, and are as legible now as when put on. It is well to renew the coating of oil each season. If convenient, dip the sharpened end in coal tar before setting, which will prevent decay. Whatever system of marking is adopted, it should be at once concise and as plain as possible. It is not good policy to trust much to memory in a matter of this character.

W. H. RAND.

Shelburne, Vt., 1885.

EARLY TOMATOES.

MR. EDITOR,—In the February number of *Canadian Horticulturist* I notice T. A. H., of Muskoka, remarks about Veitche's perfection pea, and having grown them in Victoria County, Ont., I can also recommend them. If T. A. H. would procure good seed of the Trophy and Canada Victor Tomatoes, sow them about first April in hotbed, when grown to one inch high take out of seed bed, prune the roots one-half, replant one inch apart, and when grown to two inches high again transplant, and prune roots one-half with a pair of sharp scissors, so as to make a clean cut. At second transplanting put them into thumb pots, and sink in soil in a warm corner, or cover with sash at night, and expose to sun, wind and rain through the day, until warm enough to uncover altogether. By this time he will have plants that he can turn out of his pots and plant where wanted to fruit, they will then grow right along, and with good tillage and suitable soil, he will be astonished at the results. That was my way of treating tomatoes in Victoria County, and I have sold my first ones at ten cents per pound. If T. A. H. will prune out all surplus shoots after first fruit sets, he will be astonished at the rapidity which the fruit will show in ripening. Wishing the *Horticulturist* good success in its noble work,

I am yours respectfully,

F. J. JONES.

Watertown, Dakota, March 29, 1885.

ROSE GOSSIP.

DEAR SIR,—I will in this briefly conclude for the present my remarks on roses (commenced last month under the heading of "Certain Roses—as I find them.")

I endeavoured in my remarks of last month to give a small selection of Hybrid Remontant roses, which I considered particularly valuable to the amateur rose culturist. The list I know is a small one, but it is full of variety for such a small selection, and representative of the different colors and forms, and at the same time contains, as I think, the very cream of the roses of this class. Of course it does not include a tithe of the number of very fine roses, but the list is quite large enough for the beginner.

In addition to the Remontants it is usual (although not absolutely necessary) to have in gardens where roses are grown, a few summer roses. Among the prairie roses the Queen of the Prairies appears to be the most popular. It makes a great show during its brief period of blooming; but is seen to the best advantage at a little distance as it is somewhat coarse in its coloring. Baltimore Belle is prettier, but is not so hardy. Gem of the Prairies is the largest rose of this class that I am acquainted with. It is slightly fragrant, which is unusual with prairie roses. It is a fairly good rose, perhaps the best of the family. I have never been so much in love with these prairie roses as with Remontants, Teas, and others. There is something wanting about them, a partial lack of rose-grace that others possess so fully. On the other hand it must be said in their favor that they are easily grown, and I must confess they make a grand show on a trellis or a wall

when blooming. It is not well to grow these rampant growing roses in close proximity to Remontants, as they harbour and breed the different insects which prey upon the rose, and to the greater injury of the weaker and slower growing kinds.

In mosses the Common Moss is, I think, really the most beautiful, but the Crested, though not quite so beautiful, is the most valuable to the ordinary grower, as it is less subject to mildew than any other Moss rose. Where summer roses are grown that grand old rose (the best of all summer roses) the Common Provence or Cabbage, must not be left out. When properly grown it possesses all that can be desired in a rose with the one exception of the very ill-chosen name of "Cabbage." It would extend this paper too much to take up the Teas and the many other varieties of tender roses, and besides my experience with these has as yet been too limited for me to safely advise others at any length on the matter. I may just mention that among the few Tea roses which I have tried I have found none which has given me more satisfaction than Marie Van Houtte. It is a first-rate winter rose for the conservatory. In the winter time, when there is but little sun, it entirely loses that rather coarse pink tinge which it generally assumes in summer, and becomes the most beautiful cream color. It will adapt itself to the conditions in which it may be placed better than any other of the Teas. The past winter, at the most severe season, owing to the cold, and perhaps more still to the darkening effect of the snow on the glass above them, all of my roses, with the exception of Marie Van Houtte, dropped their buds, or failed to open them, but Marie Van Houtte threw as fine or finer blooms than ever. As I think I stated before, I have found La France a particularly fine rose for the conservatory. I did not, however, test it the past winter as I did not bring any in from the garden in the fall. The small Polyantha roses are very suitable for a limited conservatory. I have two varieties, (I don't know if they are the best) but they both do exceedingly well. One is called Pâquerette and is a most beautiful, pure white, perfect, tiny specimen of a rose; and the other, called Little White Pet, is, perhaps, not quite so beautiful, but is a most prolific bloomer and a strong grower. It is not as small as the other nor is it quite such a pure color, and though altogether not quite so beautiful as Pâquerette it is worthy of a place in any conservatory. I would advise my amateur friends, who are really as yet but tyros in rose culture, not to make their first attempts with the very latest high-priced kinds. The little points of difference between these latest arrivals and the good old tried kinds may be very interesting to the connoisseur, but are altogether lost on the tyro. Although these new roses are many of them very beautiful, (and I am glad to see there is such a craze for them, glad that there is such a passion for roses, new or old), yet I doubt that they possess any more *real beauty*, apart from their newness, than many of those good old kinds that have been before the public for years. I have seen thousands of plants of that famous new Hybrid Perpetual Marshall P. Wilder in bloom, and a beautiful sight it was, but my amateur eyes, unskilled in varieties, saw only my old friend, A. Colomb. I have also had an opportunity of seeing that fine new Tea rose, "Sunset," that was ushered in with such *éclat* last season, and I cannot see what greater value it could possess to the amateur beginner than that fine old favorite, Perle des Jardines, even admitting that its color is somewhat deeper. I don't wish to discourage anyone from getting these fine new roses, I only wish them to begin right. Get A. Colomb first, then get Marshall P. Wilder; Perle des Jardines first, then Sunset. Begin with the old kinds, and if you are successful with them you will get the new ones fast enough without advice from anybody.

I find, on looking over the *Horticulturist* of April (which arrived this evening), that I intimated that I would again take up the very dark roses. I, however, think that the two kinds I mentioned last month are as good a choice as I could make; perhaps adding Baron de Bonstetten, which is a very good dark rose. Some of the dark roses other than those I have mentioned are very subject to mildew, and all kinds that are subject to this disease had better be carefully avoided, as being infectious it is of serious effect in a rose garden. I will close these remarks by saying that in this country we labor against great disadvantages in the outdoor culture of the rose;

but this very fact makes us, when we do obtain really fine blooms, prize them all the more, and the satisfaction is correspondingly greater.

After another season's lessons I may take up this subject again, but next month I will take up some of our other flowering garden plants that I find most satisfactory here.

FREDERICK MITCHELL,

Innerkip, April 1st, 1885.

NOTES FROM CALIFORNIA.

Last fall one of our most successful fruit raisers left this country for California. He owned a beautiful fruit farm of fifty acres a few miles from Hamilton, on which was cultivated all varieties of fruit, beginning with strawberries, currants, gooseberries, raspberries, cherries, blackberries, peaches, pears, crabs, grapes, and apples—in fact every fruit that is grown. He had a beautiful place, which should have satisfied any man; but his health becoming impaired, he was recommended to go to Los Angeles in California; so he rented his fruit farm for a term of years, and with his wife and family went to his new home; and this is how he writes to a friend describing the country and its capabilities. He begins by stating that his health is very much improved since he arrived last November. The climate is delightful; they only had the temperature down to freezing point twice before Christmas, and no frost since. The weather is like June in Ontario, for the grass and wheat are in as advanced a stage of growth as they are in the month of June here. He goes on to describe a piece of property which he purchased. It is on a street named Euclid Avenue, which must be a remarkable street, for it is seven miles long; it has two drive-tracks, and between these tracks in the centre of the road is a double track for street cars; there are four rows of trees the entire length, with palm trees at the upper end of the avenue, which is at the foot of the Sierra Nevada Mountains, and the whole avenue is lighted up at night with electric lights. The writer then says he bought ten acres of good land for two hundred dollars an acre. The land is in good condition, and he says he will plant two and a half acres with fruit right away: the varieties are described as berries, apricots, prunes, peaches, nectarines, pears, apples, guavas, persimmons, figs, grapes, English walnuts, dates, filberts, pecans, oranges, limes, and lemons. All these fruits grow to perfection. We intend after awhile to set out ten acres more in oranges, limes, and lemons. At this date there are green peas and garden vegetables in plenty, which are hawked round by Chinamen and sold very cheap. Roses and all varieties of flowers are in full bloom; and the soil is so prolific that if you put a slip of any kind of rose in the ground it will take root.

When I was travelling through the country from Canada I saw some curious sights; we passed by miles of cactus, some of them of enormous growth, some forty feet high, and from eighteen inches to 2 feet in diameter. There is one variety which has broad flat leaves, grows from twelve to fifteen feet high, and has large berries on it that resemble Lombard plums.

The writer then goes on to state the prices of different articles used in the household affairs, which are very reasonable. One article we will mention, that is flour. He says it is lovely roller flour, better than he can get in Canada, at least he gets nicer bread from it, and only $2 40 per 100 lbs.

In describing the locality where he has pitched his tent, he says they reside in a beautiful valley entirely surrounded by hills, which rise gradually away, till you can see a high mountain the top of which has perpetual snow on it. You can see this whitehead all the year round, and this particular mountain is called Old Baldy. We are residing about thirty-eight miles east of Los

Angeles, which town we visited last week. This is a pretty town, but very filthy; they never clear the horse manure off the streets, consequently the whole city smells worse than a badly-kept horse-stable.

With regard to climate, it has only rained twice since we came, four months ago; yet the atmosphere is moist and everything looks fresh. The peach trees are in full bloom as are also oranges and lemons; and there is ripe fruit too, lots of it, on the trees; now very beautiful to look at.

There is one drawback to all this lovely climate, they killed a large rattlesnake a few days ago, and scorpions, chameleons, and other reptiles are in plenty.

Ontario, Bernardo Co., Cal.,
Feb. 28, 1885.

HOW TO GROW MELONS.

Montreal has long been noted for its excellent nutmeg melons; the way to grow them is in the following manner:

One of the principal points in growing good melons is the saving of the seed of good specimens. We generally choose the earliest to ripen, the best flavored, the best shaped, and heaviest melon for seed, and let them ripen thoroughly before saving the seed. The seed may be sowed in hotbeds in April, taking care to choose a warm, sunny time, for a couple of cold, cloudy days would cause them to damp off. The hotbed may be made with fifteen inches deep of hot manure one foot broader than the frame, banking it all round the height of the frame with hot manure, and putting five or six inches of earth in the frame before putting on the glass, leaving it in this state for about three days till the first great heat is over, raking the earth over once to kill the weeds that are started. The seed may be sowed in five inch pots buried in the earth close together, as many as the frame will contain (where pots are not available sods turned upside down in the beds will do as well), putting five seeds in each pot buried one inch deep. At the end of three or four days they may be seen coming through the ground; this is the time they require the closest attention, for if they get too much heat they will grow too fast and topple over, or if they get a chill they turn blue in the leaf and wilt away. The hotbed should be kept at about eighty degrees heat. Melons can stand it over a hundred without injuring the plant, but it makes them grow too fast and tender. About the beginning of May trenches may be dug 14 inches deep by 2 feet wide and as long as you have hotbed frames to occupy the land, filling them with hot manure, being careful not to put in any dry straw manure, then covering it with the earth that has been taken out of the trenches to the depth of eight or ten inches, then put on the frame and glass, leaving it in this condition for twenty four hours for the earth to get warmed, raking the earth thoroughly before transplanting the melon plants, turning them out of the pots, putting one pot containing four stout plants in the centre of each sash. When they make a growth of three or four leaves nip off the top, so that they will send out side shoots for fruit. We need to be careful to give them air every sunny day, and closing the sashes at night. About the beginning of July when the vines have filled the frames and melons are formed the size of one’s fist, then it is time to remove the frames and glass beginning gradually to harden the plants. Towards the ripening season it is a good plan to put shingles or small pieces of boards under each melon to keep them from being infested with worms or from decaying if the ground is wet after rain. For late melons a few seeds could be sown in the centre of each sash instead of plants transplanted from another

frame.

The best land for melons is a sandy loam, but any well enriched and drained will grow melons.

By this system of cultivation nutmeg melons have been grown to weigh from fifteen to twenty-five pounds and keep their fine flavour also.

R. BRODIE.

BLACK KNOT—A FUNGOID EPIDEMIC.

With reference to Mr. Webster's article on his views on Black Knot which appeared in the *Horticulturist* for April, I would beg to state from observation and a slight knowledge of entomology, that he is wrong in stating that an insect is the direct cause of Black Knot in either the plum or cherry trees alluded to. The insect he alludes to is a fungus fly which deposits its eggs in the knot, which is yet in a green or downy state, not yet hardened, or it may possibly be a curculio, this being effected in the early part of summer.

On examining some knots I have found no grub in them, these evidently have not been observed by the insects, consequently they must not have been the direct cause. The fungus fly is not so numerous here as in Europe, mushrooms being more plentiful there, and form a special article for the perpetuation and propagation of their species.

Lichens on fruit trees or old fences are fungoids. The resinous pine knot is a fungus, the punk in a diseased maple tree, the "birkba," as boys call it in the north of Scotland, is the decaying birch tree used by the boys as a substitute for blotting paper, is also a fungus, and so on, *ad infinitum*; but this is enough for illustrations in so far as trees are concerned.

Herbaceous plants are also affected by fungus, *e.g.*, ergot in rye, rust and smut in wheat, also smut in Indian corn, and the rot in potatoes.

I may as an horticulturist (fungus being only a low form connected with the vegetable kingdom, but an important one) say all epidemics affecting the animal kingdom are of fungoid origin. Smallpox is nothing more or less than a crop of mushrooms of a low type upon the human body, which usually take some nine days before they are ready to throw off their spores or seeds —then look out.

The cholera, black plague (which almost depopulated the cities of Athens and London), yellow fever, and all forms of fever and ague, scarlatina, measles, whooping cough, hereditary pulmonary consumption, and others of an epidemical character, if minutely examined, can be traced to fungoid origin.

Fungoids perform an important part in the economy of nature. Every thing not in a healthy condition, in order to perpetuate the races, either animal or vegetable, must succumb to their influence; they are the agents to hasten decay, in order that the elements may go to the sustenance or formation of other organic substances.

I have observed an insect allied to the fungus fly—the dragon fly, which boys usually dub the devil's darning needle. His business is to keep in check the spread of the silk worm, tomato grub, and all other caterpillars of a similar type, otherwise we would have recourse to artificial means to guard against their ravages.

The fungoid theory, still having reference to the vegetable kingdom, of epidemics is not generally understood even by a number of our medical practitioners, and inventors of patent medicines not having a thorough, or may be only a superficial, knowledge of botany. They usually treat as to effects, not having any knowledge of the cause, and this can only be acquired

through a thorough knowledge of the vegetable kingdom through which the causes originate. I think this is enough for the present.

R.

Berlin, 6th April, 1885.

P.S.—In alluding to the Black Knot fungus on the plum, I forgot to mention another fungus affecting the fruit of the plum tree, which usually exhibits itself in the shape of a small bladder. If you take a section of it under the microscope, you will find that I am correct.

R.

EXPERIENCE IN SPRAYING WITH PARIS GREEN.

MR. EDITOR,—As the time is near for our fruit trees to put on their beautiful clothing of bloom, which alone gives to us the expectation of a coming harvest, I send you a little of my experience as a note of warning in the use of Paris Green for destroying insects, or as a remedy for the curculio. The story of the Indian is good—perhaps as near the mark as we can get: first catch him, and then you can deal with him. I have tried coal tar burning under trees with sulphur, making a dense smoke; have placed a pot full in a calm night, and let it burn for hours to no purpose; have tarred paper and wool, and tied them about the trees, and afterwards found the curculios sleeping in the folds in safety. For two years I have used Paris Green, one-third to one-half teaspoonful to a pail of water, thrown over the trees by a hand-pump in the form of spray, beginning before all the blossoms had left the young fruit for the first application, repeating the application for several weeks in succession on apples, plums, pears, &c. The young apples sprayed continued to grow till the third application, when I noticed the edges of the leaves began to turn brown and present a dry appearance, the fruit to almost stop growing, and to stand still by the middle of July. When the apples were about one-half size they began to turn a pale red and to drop, while the leaves fell as in autumn. A Duchess of Oldenburgh acted in a similar manner; not one-half of the fruit was fit for cider, while some hung on till October no larger than hickory nuts. One red Astrachan tree, very heavily laden, was only sprayed on one side; the sprayed side acted in the same way as the other tests, while the unsprayed kept green and thrifty, making a fair growth both in fruit and foliage after the other was entirely bare. The fruit on the plum trees was destroyed as well as the foliage. It began about the fourth application of the green, and continued till not a leaf was left, while a large portion of the fruit was stung and destroyed before the leaves died away. To nearly 300 apple trees I only gave one application; on these I could see no benefit whatever, as those not sprayed were as free and sound as those of the one application. One of my acquaintances had several fine plum trees, heavily laden with fruit; part he sprayed in 1883, having a fine crop of fruit; last year every tree so used was dead. My opinion, so far, in respect to using the green, is that it must be done very carefully, as a little too much may cause the loss of the trees as well as the fruit. I hope some of your readers will test the use of the green this coming season carefully, till we can ascertain just the strength required to be successful, and not destroy the trees. One teaspoonful to four pails of water is as strong as I would risk on my trees for the present, and stop then at the third application. On pears I could see no benefit or harm from it.

Yours very truly,

JOHN P. WILLIAMS.

Bloomfield, April 6th, 1885.

PIMPERNELL.

(*To an English weed accidentally found in the garden.*)

Sweet souv'nir of my early days—
Those days remembered well—
How I loved your smiling face,
Starry little Pimpernell.

Where now are those with whom I watched
Your petals close in tiny bells?
Oh! they are scattered far and wide
Beyond the ocean's heaving swells.

Some have in distant lands been raised
To honor and to fame.
And will upon the page of Time
Leave long inscribed their name.

Others are sleeping their last sleep
In the dear land I love—
Are waiting now in trustful hope
The summons from above.

What is it that's around us thrown,
A charm of fairy spell,
That even now on childhood's days
Our memory loves to dwell?

Our hearts then full of buoyant hope
And free from anxious care,
Our heaven was in the present then,
The future had no fear.

Could roam at will o'er hill and dale
With bursts of childish glee—
Could watch the minnow in the brook,
The wild bird and the bee.

Oh! do not curb with hand severe
All childhood's little ways,
The world has yet of grief in store,
These are their halcyon days.

Owen Sound.

M. W. M.

A REMEDY FOR PHYLLOXERA.

(From the *Christian Journal*, English paper.)

As the result of a number of experiments which have been conducted by Professor Barr, of San Francisco, it is stated that a sure cure for Phylloxera had been found in quicksilver. The remedy is, according to a report by this professor, just issued, ½ oz. of quicksilver, thoroughly mixed with an equal weight of clay, in the soil of the hole in which the vine is planted.

The cost of the mercury was, at the time of the experiment, only ½d. per vine, or as the vineyards are planted in California, from £1 8s. to £2 per acre. The suggestion as to the use of mercury came from the fact that a small globule of that metal in a case of mounted butterflies will protect them against the depredations of beetles, and also to the fact that mercurial treatment

is destructive to insects. The report expresses the belief that a dose of the mixture will protect a vine for at least 20 years. It appears that from many experiments made and reported on, the efficiency of the quicksilver remedy has been determined. Other trials are also being made.

THE ILLUSTRATED WAR NEWS.

The Grip Printing and Publishing Company, of Toronto, issued last week No. 4 of their fine illustrated newspaper, descriptive of events connected with the rebellion in the North-West. Each successive issue of this paper eclipses its predecessors, and we are pleased to observe that the publishers are meeting with the success which their efforts deserve. No. 4 contains the following illustrations:—Lord Melgund's Scouts surrounding three of White Cap's Warriors; The Winnipeg Light Infantry (91st Battalion) preparing for service; White Cap, the Sioux Chief; Trial Practice with the Gatling at Swift Current: Col. Otter's Brigade approaching the South Saskatchewan; The Nova Scotia Provisional Battalion at Montreal; Steamers at Medicine Hat loading Ammunition and Stores; Reading Battalion Orders in the Drill Shed, Hamilton; The Midland (Col. Williams') Battalion marching to the C. P. R. Depot, Winnipeg; Portraits of Officers at the Front, including Col. Ouimet, M.P.

No. 5, which was issued on the 2nd May, was an intensely interesting number, containing, in addition to other fine illustrations, sketches representing the Relief of Battleford, and the Battle at Fish Creek. The price of the paper is fifteen cents per copy, and it can be procured either from the publishers or from local news-dealers.

PRINTED AT THE STEAM PRESS ESTABLISHMENT OF COPP, CLARK & CO., COLBORNE STREET, TORONTO.

TRANSCRIBER NOTES

Misspelled words and printer errors have been corrected. Where multiple spellings occur, majority use has been employed.

Punctuation has been maintained except where obvious printer errors occur.

Some illustrations were moved to facilitate page layout.

A Table of Contents was created with links to the articles for easier use.

[[The end of *The Canadian Horticulturist, Volume 8, Issue 6* edited by D. W. (Delos White) Beadle]