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PERLE DES JARDINS.

THE
Canadian Horticulturist.

VOL. IX.]

MARCH, 1886.

[No. 3.

ROSE PERLE DES JARDINS.

This beautiful rose, of which we present our readers with a colored illustration, belongs to the class of Tea roses. The late Hy. B. Ellwanger, in his most instructive and valuable work entitled "The Rose," says of this class that it "may well be taken as a synonym for all that is delicately beautiful. What refinement of color, what subdued, yet powerful, fragrance do they possess. They are indeed the centre of loveliness; like fair maids at a reception surrounded by admiring groups, these lend beauty to the others, which may well strive to find a near approach to their sweet presence, that perchance they may receive a smile and borrow beauty, diffused from their chaste loveliness."

The Tea roses combine delicate coloring and a most agreeable perfume with continuous flowering. For these reasons they are the favorite class with many who, having "beautiful roses in their hearts," will give them the care which in our climate their tenderness makes imperative. Nor is this care of such a difficult or laborious nature as to be at all discouraging to an earnest soul. They need to be planted where they will be sheltered from the sweep of bleak winds, and can catch

the first rays of the morning sun; away from under the shadow of overhanging trees or high buildings, yet where groups of shrubbery and the resistance of fences and buildings break the force of gales, taming their fury into gentleness. And then, when come the days of sere and yellow leaf, when our maples have put on their scarlet robes and the beech her russet gown, then the Tea roses must be carefully housed and stored where they shall be safe from fear of frosty weather.

The Perle de Jardins is one of those tea roses which possesses many excellent qualities. It has a very healthy constitution, which enables it to adapt itself to a variety of circumstances, so that it is found both among those which are recommended for bedding out, and those for forcing under glass. A rose in order to be desirable for bedding out, should be a free bloomer, of healthy habit, and possessing a pure and steadfast color of bloom; and for forcing it should add to these qualities symmetry of form, fragrance and high finish of flower. All these qualities are found in this variety to such a degree that it is called by our best authorities a superb rose for forcing, and fine also in the open air.

This rose was raised by Antoine Levet, of Lyons, France, and sent out by him in 1874. It is of large size, well formed, full, of a rich canary yellow color. Those who love to grow roses will surely succeed with this, and will be abundantly satisfied with the exquisite beauty, fine size, and great abundance of its highly finished flowers. Canon Hole wrote truly of the rose grower who would have beautiful roses when he said, "he must love them well and always. To win, he must woo, as Jacob wooed Laban's daughter, though drought and frost consume. He must have not only the glowing admiration, the enthusiasm and the passion, but also the tenderness, the thoughtfulness, the reverence, the watchfulness of love. His must be no ephemeral caprice, like that of the young knight who loves, and who rides away when his sudden fire is gone from the cold white ashes. He is loyal and devoted ever, in storm fraught or in sunny days; not only the first upon a summer's morning to gaze admiringly on glowing charms, but the first when leaves fall and winds are chill, to protect against cruel frost. To the true rose-grower must the rose-tree be always a thing of beauty. To others, when its flowers have faded, it may be worthless as a hedge-row thorn, to him, in every phase, it is precious. The glory which has been, and the glory which shall be, never fade from his heart."

WORMS ON ROOT OF GRAPE VINES.

Mr. W. C. Webster, Stoney Creek, writes us that the worms on the grape vine he sent to this office, were thought

to be a quarter of an inch long, and as thick as a small darning needle; with very small black head, and of a greyish color. Have any of our readers found any such worms injuring the roots of grape vines?

THE CANKER WORM.

Gentle reader, have you ever felt disposed to smile, with something of contempt in your heart, at the grown up man chasing, net in hand, some fluttering insect, until the sweat stood in drops? Or, perhaps, more charitably inclined, concluded that the poor man surely had "a bee in his bonnet?" Possibly you wondered why any man in his senses should be spending his time after such a childish fashion, chasing a butterfly across the meadows. You could not see what possible good could come of such a spending of time and strength, and little thought that yon man, with his net of gauze, was searching for the key that would open the door of your prosperity.

Yes, it is even so. To the labors of the entomologist are we fruit growers already greatly indebted, and this canker worm pest is an apt illustration of the service they have rendered. Theis plunged Achilles in the Styx, and made him thereby invulnerable in every part save the heel by which she held him. He who would slay Achilles must first learn where was the spot his weapon might enter. To overcome these insect foes we need to know their vulnerable point. This, by the studies of the insect hunter, is often revealed; and a knowledge of their life-history opens the way to successful methods of destroying the insects or preventing their ravages.

There are two insects, bearing strong resemblances, but really distinct, which are known to fruit growers under the one name of canker worm. The un-

practised eye would hardly detect a difference, and as for the mischief they do, there is no difference. When they come in force, whether in the one guise or the other, or, as sometimes they may, both together, every leaf is taken; and the orchard looks as though some sirocco blast had swept it, scorching up the foliage. They make clean work, what "the canker worm hath left" would be starvation for the caterpillar. One of these insects is known as the Spring Canker Worm, designated by entomologists *Anisopteryx vernata*. The worm, or larva, when full grown, is about an inch long; varying in color from greenish yellow to a dusky, and sometimes a dark brown, striped longitudinally with numerous pale, narrow lines. This striped appearance is shewn in fig. 1; *c* represents a side view, and



FIGURE 1.

d a dorsal view of one of the segments, highly magnified; *a*, the full grown worm in the attitude which it often assumes when at rest. But this creature is not always a worm, as its life history will shew. There are changes in nature that rival the magic power of the glass slipper; changes more transforming than that of the humble peasant girl in course homespun, into the witching princess in silks and diamonds.

When this worm has attained its full size it ceases to feed, leaves the tree, and burrows in the ground; going to a varying depth of from two to four inches, where it forms a cell, which it lines with silken threads. This is its winter hiding place, in which it undergoes one of its curious transformations, for after completing its own tomb, it

throws off its skin and becomes what is termed a chrysalis; which, in this case, is a pale, greyish-brown object, hardly half an inch long, and the sixth of an inch thick, tapering to a point at the lower end. Here it lies, like a mummy in its case, and seemingly as dead, until the hour of resurrection. In the autumn, when most of the leaves have fallen, and wintry frosts have blackened every tender plant, and there come those balmy days of the south wind which we call Indian Summer, then a few of these waken into life; but the greater part remain, cold and still, until the return of spring. Then, when the buds are breaking, and nature is rubbing her eyes, they too awake; and bursting their cerements, creep out of the ground. Not now the crawling, looping, measuring-worm, that last summer fattened on your apple orchard; but, in the case of the male, a silken-winged, airy creature, delicate and beautiful; for Cinderella has laid aside her russet homespun, and put on her robes of princely richness. You may see it floating about in the sunshine, moving hither and yon, as though to live were a joy, and joy the object of its life.

An excellent representation of this moth is given at *a*, in fig. 2. The two



FIGURE 2.

fore wings are an ashen grey, almost transparent, an irregular whitish band crosses them near the outer margin, and there are three interrupted brownish lines between this band and the base of the wings. In the tip of each of these wings is an oblique black dash, and a black line along the border at

the base of the silken fringe. The two hind wings are of a very light grey color, with only a dusky dot near the middle of each.

How unlike this silken-winged creature is its mate. Nature in this instance seems to have been very partial in the bestowment of her gifts. He can float in the sunbeams, and fly whither he will; she, poor creature, wingless and clumsy, can only creep. She may be seen at *b* in fig. 2. Her body is full of eggs, which are so heavy that she drags herself slowly along until she reaches the trunk of the tree, up which she climbs. At *d*, in fig. 2, is a magnified segment of the abdomen, shewing the two rows of reddish spines that run transversely across each segment; *c* represents a part of the antenna of the female, and *e* her ovipositor, both magnified.

The other species is the Fall Canker Worm, *Anisopteryx pomataria*. This

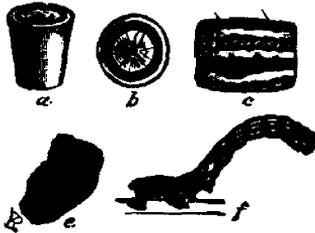


FIGURE 3.

is shewn, full grown, at *f*, fig. 3, while *c* represents a segment magnified so as to render the markings more distinct, which will be seen to be broader and fewer in number than they are in the



FIGURE 4.

Spring Canker Worm. The wings of the male moth are darker, *a*, fig. 4,

and the fore wings are crossed by two whitish bands. The female of this species *b*, fig. 4, is also wingless. The eggs also differ in appearance: Those of the Spring Canker Worm are oval, *b*, fig. 1, and are laid in irregular masses, often as many as a hundred together; while those of the Fall Canker Worm are flattened on the upper surface, with a puncture in the centre, and a brown circle near the border, and are laid in regular, compact masses. See *a*, *b*, and *e*, in fig. 3: *a* being an enlarged representation of an egg, *b* shewing the top of it, and *e* the manner in which they are placed compactly together. It will also be seen that the antenna of the one, *c*, fig. 2, is covered with bristles, while that of the other, *c*, fig. 4, is smooth; and the abdominal segments of the female of the Fall Canker Worm have no bristles, *d*, fig. 4.

The full grown worm of this species also burrows in the ground, and there spins a cocoon of buff colored silk, within which it changes into the chrysalis state, remaining in this condition until the autumn. After the first fall frosts, the perfect insects appear, and the females seek the trunks of the trees up which they crawl to deposit their eggs.

In the early spring, just when the buds have broken and the tender leaves unfolded, the canker worms of both species are hatched, and begin their destructive work of feeding on the leaves. The larger they grow, the more they eat; travelling in countless numbers over the tree, and leaving not a leaf behind.

It has been already stated that the females of both species are wingless. This fact, for the knowledge of which we are indebted to the studies of the entomologist, of that man with "a bee in his bonnet," is the head of Achilles, the vulnerable spot where we may strike and conquer. If we

can trap the female on her way up the trunk of the tree, or prevent her from crawling up, we become masters of the situation. Tar, mixed with oil or lard to prevent it from becoming dry, refuse molasses, printer's ink, in short any very sticky substance smeared upon canvas or stout paper, say six inches wide, and tied around the trunk of the tree so that the female moths will stick fast in the adhesive substance, will effectually prevent them from getting up the tree. This sticky substance must not be allowed to get dry and hard, else the moths will crawl over it but must be renewed so as to be always in a condition to hold them fast. Troughs of lead have been fastened around the tree, and kept filled with oil, and found to answer an excellent purpose. Others have used broad tin collars, fastened around the tree, sloping downwards and outwards, so as to prevent the moth from climbing up. In all these cases care must be taken to have no crevice left underneath the bandages or collars, not even the smallest crack; for the moth, foiled in her attempts to climb the tree, will deposit her eggs on the trunk below, and the young worms are so small that they can creep through a very tiny crevice. We suggest as an additional means of defence, the washing of the trunk of the tree below the bandage or collar, with an alkaline solution, either soap or white-wash or potash, say one pound of potash dissolved in two gallons of water. This will kill the eggs or the young worms. These bandages should be put on about the first of October, and kept in proper efficiency until the advent of severe winter weather, and renewed early in the spring, as soon as the mild weather calls the moths from their winter quarters. With careful attention to these details, this formidable destroyer of our orchards can be completely routed.

ENCOURAGING WORDS.

I like your little publication very much; it is by long odds the best of its kind that has been published in Canada for the last thirty years. Everyone who has a garden ought to subscribe for it. JOHN FORSYTH.

Barrie.

I have taken the *Canadian Horticulturist* for two years, and would not now like to be without it. I think it is a very cheap publication for \$1 a year, and the report of the Fruit Growers' Association is included, which is also very interesting and useful. This and your plant distribution make it a marvel of cheapness.

Caledon East. REV. J. GOODMAN.

I think the last year of the *Horticulturist* has been the best year of its existence. God bless the men of the association in their labor of love in spreading information throughout the Dominion, the useful and the beautiful, the fruits and the flowers. If the loving Father has given us so much on earth what must Heaven be with its holiness and beauty.

Bobcaygeon. THOS. GORDON.

QUESTION DRAWER.

BEN DAVIS APPLE.

(1) Please inform me what is your opinion of the Ben Davis as a market apple. Does it meet the tastes of the English people? (2) Also please inform me which in your opinion is the best winter apple for this section of country. G. H.

Peterboro'.

REPLY.—(1) We submitted the inquiry about the value of the Ben Davis as a market apple to two gentlemen who have had experience in shipping

apples, and received the following replies:—

DEAR SIR,—I have just read your letter with respect to the Ben Davis apple. I have not seen any quotations except from New York, and there they were higher than any other variety. I sent my Ben Davis and Golden Russets to Montreal, where they were bought and stored for spring shipment. I got twenty five cents more per barrel for the Ben Davis than for any other variety. It is certainly one of the best shipping apples we have, but the tree wants good warm soil, well drained, and good cultivation. The fruit must be thinned on the tree to produce good samples, then they will bring more than Golden Russet or Northern Spy.

P. C. DEMPSEY.

Albury, P. E. Co., 23rd. Jan., 1886.

DEAR SIR,—At present the Ben Davis is an excellent apple to grow for profit, as it bears well and ships admirably, and takes well in the British market. It is just a question if it will hold its present place in these markets, as they are becoming particular regarding *quality* and Ben Davis is not number 1 in that respect. Upon the whole, however, I think it will remain among the shippers to England, although, others will be in advance in price owing to a better quality.

Yours very truly,

ALEX. McD. ALLAN.

Goderich, Jan. 20, 1886.

(2) Probably no apple stands out so much superior to all others as to deserve the distinguished position of the "best winter apple." If there be any such apple, we should expect to be told that it is the Golden Russet. Will our readers in the County of Peterboro' please to write us and let us know

which of the winter apples grown by them they consider on the whole to be the best.

CANKER WORM.

Would you have the goodness to inform me as to the best method of getting rid of that pest which we call down here the *measuring worm*, from its habit of looping itself as it moves along. It literally bares the trees of every leaf and appears to have established itself, as it comes along every season with the utmost regularity. Please favor me with your advice in this matter. I want a method of wholesale destruction, for their name is legion, and oblige,

Pictou, Nova Scotia. H. PRIMROSE.

REPLY.—See article on the Canker Worm in this number.

WHEN TO SPRAY PLUM TREES.

What time of the year should plum trees be sprinkled with Paris Green, as mentioned by one of your correspondents as being a preventive of the curculio?

T. A. M.
Parkhill.

REPLY.—As soon as the fruit is set. The curculio begins its work very early in the season, just as soon as the young plums appear.

LUCRETIA DEWBERRY.

How should the Lucretia Dewberry be treated? It is something new to me.

Bowmanville.

C. T.

REPLY.—The dewberry is a trailing blackberry, and may be allowed to trail over the ground or upon a support of some kind. Probably an inclined trellis like that mentioned for grape vines (see p. 284, December, 1885) would be an excellent support.

Is the low bank of a creek a good place for cultivating the Lucretia Dewberry? I have a creek running through my garden and think if its banks were covered with dewberries it might prove more profitable than wild grass. The wild dewberries grow in our beaver meadows. An answer in the *Canadian Horticulturist* will oblige.

F. W. COATE.

Cape Elizabeth, Muskoka.

REPLY.—The Lucretia, being comparatively a new variety of the dewberry, has not yet been grown in very many localities, hence it is impossible to speak from personal experience, or from that of others. One would certainly conclude that it would thrive where other varieties of the same species grow naturally. Please to give it a trial and report results for the benefit of others.

CHIONANTHUS.

I have a fine lot of young seedling Black Ash, about 3 feet high. Would I succeed were I to graft the Chionanthus on a few, for it appears it is hardier than at first supposed? I thought Muskoka should try it.

Medora, Muskoka.

T. A. H.

REPLY.—You can graft it on the White Ash with better hope of success.

(1) Can the Catalpa be grafted? If so, on what stock? My plant has two side shoots, which I would like to graft. I am going to try on several kinds of timber roots, and will report if successful. (2) Please inform me how to grow the Mountain Ash from seed, viz., what process the seed has to go through. (3) The English Buck Thorn seed. (4) The Cedar Tree seed. (5) The Norway

and the White Spruce seed. (6) The Balsam Fir Tree seed.

Appin.

JOHN MCINTYRE.

REPLY.—It can be grafted on seedling Catalpa stocks. (2) Wash the pulp clean from the seed and sow in sand. (3) Same as Mountain Ash, (4) Sow in light sandy soil, and cover lightly. (5) and (6) Sow in light sandy soil, and screen from the sun.

SEEDLING ORANGE TREE.

MR. EDITOR.—I have an Orange Tree; I planted the pips myself. The tree now is eight years old; a fine tree it is, something over one inch thick in the stem, and about three feet high, and a fine bush at top. I have it in a tub in the house; in the summer I stand it out doors, but it has never bloomed yet. There are thorns upon it over an inch long. Can you kindly tell me the reason it has never blossomed. Is it because it needs grafting? I never noticed whether they grafted their young Orange Trees south or not, but it seems to me, if I remember right, that the trees there would be in full bearing at eight years old. Please answer in your usual way, through the *Horticulturist*, and oblige,

Yours respectfully,

T. G. GASTON.

16 Inchbury-st. South, Hamilton, Ont.

REPLY.—Yes, it needs grafting. Seedling Orange Trees, grown as they must be grown in our climate, are very slow in coming into bearing.

THE CLEMATIS.

I find we have the Clematis nicely classed in the report of 1883. Now, to make it more complete, will you name or give a list of those Clematis that are sweet-scented, other than Flammula.

Medora, Muskoka.

T. A. H.

REPORTS ON PLANTS RECEIVED.

The little Deutzia is, I fear, no use here, as it is killed to the ground every winter. The Prentiss Grape looks to me a poor grower. Fay's Currants are growing. Black Raspberries all died; they arrived all dried up; none of them grew. This is all now, Mr. Editor. Wishing you a prosperous New Year.

Muskoka.

T. A. H.

My Pear Trees have all done well, except Clairgeau. I like Clapp's Favorite extremely well. My apple trees are all doing well. My Grimes' Golden Pippin fruited well, fruit best quality, size small, slow grower. Ontario had 15 or 16 apples, size medium or large, flavor good, comes in bearing early, in three or four years after planting. Swayzie Pomme Grise had one specimen last summer; looks like American Golden Russet. Grapes have not done well with me. Burnet kills down to snow mark every winter. Moore's Early is not a strong grower in my grounds. My Saunders' Hybrid Raspberry has done well, hardy and good. I have a wild one growing in a corner of the fence on a 50-acre farm, some 80 or 90 rods from the house, similar in every particular as far as I can see, even to the color of the fruit. My Hydrangea paniculata was destroyed. My Catalpa has done well.

Appin.

JOHN MCINTYRE.

In making my report for the last season of the things sent to me by the Horticultural Society, I would mention first the Grapes, the Worden and Prentiss. They grew moderately, but have borne no fruit yet. The Niagara Raspberry froze to the snow last winter, so did not bear much fruit. The other fruits I have, most of them did well. The Raspberries grew strong. The Mammoth Cluster Black Cap did well,

and bore a good crop of fruit. The Gregg was frozen down to the snow last winter, and did very poorly. Gooseberries did very well, and bore a good crop. The Strawberries were very fruitful, especially the Sharpless. The Bidwell was a failure. I have a number of other kinds, of which I hope to report favourably next season

SAMUEL FEAR.

Brussels, Jan. 6th, 1886.

For the benefit of the Horticultural family I will report: First, the Prentiss is a failure, probably my own fault, as I had just bought my place, very much out of repair, and in my haste to get small fruit growing I made several mistakes. The Jessica is doing well. I hope for fruit next fall. I have also planted Brighton, Moore's Early, Early Dawn, Clinton, Delaware, Roger's 3, 4, 15, the inevitable Champion and others, besides a chance seedling that fruited this fall, which I am suspicious will make a name by and by. The Fay's Currants are doing well, one I received from C. A. Green in the spring of '84 fruited this year. The Catalpa speciosa is fairly started, 22 inches high, strong and healthy. My place is nicknamed Hurricane Hill; it gets the benefit of the breezes from all directions, and the wind sometimes twists the bushes into withes. The Russian Mulberry wintered with slight injury, while my one Peach tree was frozen to death before Christmas. The Cuthberts came through perfect, but I can't make a report worth a cent until I get more growth. I am trying to get a complete succession of small fruits, from strawberries to grapes.

TRUMAN COOPER.

Picton, Prince Edward Co., Ont.

The Catalpa set out last spring grew very rapidly, and seems to be doing nicely. Will it require any pruning

or trimming, and what is the proper time; also, best time for pruning grapes?

J. E. R.

[The Catalpa should be trained to a single straight stem until it is about six feet high, and then allowed to branch so as to form a head.

The early spring is the best time to prune. If Grape vines are laid down and covered in the fall, in order to protect them with some covering during winter, it will be preferable to prune in the fall just before laying the vines down.]

The first plant that I received was Moore's Early Grape, which made a feeble growth and then died. The next season I got the Worden, which had some fine bunches of grapes this season, but they were very bad for dropping off as soon as ripe. Is that a peculiarity of the Worden? [No.] I next got a plant of the Prentiss, which has made a fine strong growth this last season. Last spring I got Fay's Prunif Currant, and it has done very well. So much for the premium plants. I grow Concord, Wilder, Brighton, Agawam, Pocklington, Martha, and some Niagara seedlings. Of the Grape vines, my Wilder, Agawam, Concord, Worden, Brighton, and Pocklington fruited this year, and I thought that the Wilder, Brighton, Concord and Worden were just splendid. I liked them best in the order named. Another year's experience may change my opinion. I am also trying the Russian Mulberry; it has been planted three years, and is about 7 feet high; it was about as thick as a wheat straw when I got it, and root and all about 14 inches long. I got some seed of the Catalpa speciosa last spring and planted them; they seem to be very easily grown; I have about forty of them; some of them grew about 14 inches

from the seed. You told us that you would like to hear from members, hence this scribble.

WILLIAM TURNBULL.

Brewster, P.O., Ont.

I received last year the Fay's Currant which grew nicely, but of course, it is yet too early to say anything as to final results.

J. A. WALKER.

The Fay's Currant that I got of the Association made a good growth the last season, and I think that it will bear this. The Grape Vine that I received the season before has not made growth of wood to my expectation, but was alive and healthy in the fall. With careful treatment it may do well yet. I am well pleased with the way the Journal is conducted, and the useful information it contains.

Paris, Ont. JOHN R. FOLSETTER.

The Prentiss Grape Vine received in the spring of '84 has done very well. It is not so rapid a grower as the Niagara. Senasqua is no good here; giving it the same care as others, it does not make growth sufficient to be classed with either Eldorado, Vergennes, Martha, Delaware, Rogers No. 15, Janesville, Moore's Early, or the two first mentioned. I have one tree of Yellow Transparent Apple planted in the spring of '84, two years old when planted; it stood last winter without even a bud being injured by frost. I don't know the fruit, but if it is as good as recommended, I would consider it the best early apple for cold countries.

H. C. REID.

Enterprise, Addington Co.

The Prentiss I had the spring before last has made a fair growth, and is in good shape for fruiting this year.

Fay's Currant made five good canes last season, and I am waiting to see the fruit.

E. ROBINSON.

London, Middlesex Co.

I beg to state that we are situate on high and cold land. The Grape Vine received three years ago did not thrive well, and last winter died. The three papers of flower seeds did well, and gave entire satisfaction. The Catalpa received last spring is growing well at present; if it stands the winter will let you know.

HENRY HUDSON.

Feversham, Grey Co.

I only wish with many others that the *Canadian Horticulturist* should be enlarged, and the money wasted in furnishing plants and trees be used for that purpose. The only one of the articles sent me is a small Apple Tree which has never borne fruit, and a bastard Raspberry, something between a Black Cap and a Red Raspberry, which yielded very little bad fruit, but any amount of canes, which I have dug up and burned. I certainly think a better use can be made of the money than squandering it in that way.

Palermo.

H. M. SWITZER.

The Fays' Currant Bush received last spring has made a strong, healthy growth.

JOHN KAAR.

Brownsville, Norfolk Co.

DEAR SIR,—Although I have been a subscriber to the *Horticulturist* for several years, and consider it an excellent investment for any Canadian who has a garden, no matter how small, I have never yet reported on the premium plants received from you, and will, with your permission, do so now.

Saunders' Hybrid Raspberry, was, I think, the first thing you sent me, and I have often wondered that I read so little about it, as I have found it an

excellent berry—quite hardy, prolific, and of good size and flavor. The color may be an objection with some, but makes a pleasing variety when mixed with red and white berries. Season, middle of July to middle of August; main crop, about 1st August.

Wealthy Apple has done so well in this neighborhood, that I set out 20 in a small orchard I planted in the spring of 1884, about twenty miles north of the Ottawa River. They stood last winter, which was a very severe one, without showing any signs of tenderness, and I consider them hardier than the Fameuse and rather a better keeper, but not quite equal in flavor.

Worden Grape—Very good indeed, ripens about the same time as Creveling—is a strong grower, good bearer, and quite hardy here.

Prentiss Grape—Was planted spring of 1884, has made tremendous growth during last summer, and will bear this year I expect.

Canada Baldwin—Planted 1884; is doing well and is a vigorous grower, having made at least twice the progress of a Russian apple (name unknown), received from you at same time.

Fay's Currant—Planted last May; made good growth, and will doubtless be an acquisition.

I have also had from you a very pretty little rose tree, which bears the smallest white roses I have ever seen. They are about the size of bachelor's buttons. This, of course, is taken indoors during winter.

My soil is a sandy loam, and is liberally manured every year. The climate is not so severe as in many places to south and west of here, and as we usually have a pretty liberal covering of snow for the three or four months of coldest weather, many small

fruits escape here that are winter-killed in other localities. E. B. MEYER.

Côte St. Paul, Que., Jan. 1886.

BIGNONIA RADICANS.

I notice that Mr. S. H. Mackenzie has not been successful with *Bignonia radicans*.

Our treatment of it here is to lay down the canes in the fall, and give them a slight covering of earth or straw, the same as we do with grape vines. Protected in this way, there is no trouble in getting it to bloom every year.

E. B. M.

WHAT THE PEOPLE SAY.

CLEMATIS CULTURE.

BY THE HON. MRS. LAMBART.

As the current Horticultural journals of our day contain so many enquiries concerning the cultivation of these beautiful climbers—enquiries that remain unanswered—I am tempted to offer a few suggestions on the subject, which I do with confidence in their correctness, as I have long grown the flower extensively, and have now in successful cultivation more than thirty varieties of it.

As to the propagation, I have searched in vain for information on the subject, and find the authorities *ominously* silent. True, they *can* be raised from seed—so can roses—and with about the same general result, that is: "a perfect lottery what the new plant will be"; but, to propagate any variety *truly*, that is quite another matter. That exhaustive and expensive work by Jackman on "The Clematis as a Garden Flower" says "root grafting," but we amateurs will thank him with little enthusiasm for directions so utterly useless in any but professional hands. Then there is "layering" which is also not practicable by the amateur, and, at best, is but a difficult and uncertain operation.

The details of the work, and the apparatus necessary to perform the propagation by layering, are described and illustrated by Prof. Clausen of the Imperial School at Nikitr, in the Crimea, in the "Revue Horticole," and copied into the April number of "Vick's Magazine" for 1882. It is too formidable an undertaking as there described, on page 114, for me ever to have attempted it, and even now the length of the useless directions deters me even from copying the article. But, if the enquirer is enthusiastic, he can easily procure the details of the work with the references I have here given.

As to the cultivation of the Clematis, the first and imperative requisite is "plenty of sun and air." Without both of these it is utterly impossible to have any successful result. The earth must be dug out at least two feet deep, and at the bottom of the trench six inches of drainage, and then filled in with a mixture of sand and loam, but the *principal component* must be old manure from a cow stable;—in fact the soil in which the Clematis must be grown in order to flourish should be just what an Asparagus bed is made of, and like it, must be heavily top-dressed with *old* manure every year, and a soft and spongy consistency of the soil be maintained. The secret of *large* flowers depends upon potash in the soil, and to meet this want, Jackman, the great English Clematis grower, has prepared a manure especially for the purpose, but, as this is not to be had in this country, an excellent substitute and wonderful results are obtained by *frequent* waterings with a *weak* lye made of wood ashes. It is also of great use to mix powdered lime or chalk with the soil when preparing the Clematis bed. With this treatment I have had an unlimited supply of great white stars from the 10th of

June until the 1st of November, averaging 9 to 10 inches in diameter, the consistency of wax, the texture of satin, and remaining for several weeks in bloom, each flower, before falling apart.

In the autumn the Jackmani and Viticella varieties should be cut close to the ground—the Lanuginosa varieties left 9 inches long, and the perennial wooded ones not pruned at all, but carefully taken from the trellises, laid on the ground, and covered (in this climate of Ottawa) with *old* manure to a depth of at least 12 inches. In the spring this covering is to be raked off, and the long wood tied to the trellises, where it soon sends out young flowering shoots which bloom about the 10th of June, and are followed shortly after by the other varieties, which send up their blooming shoots from the root every year, rapidly covering space with foliage and flowers. If the colors are carefully chosen, a perfectly radiant combination of colors may be had from June until frost.

As to varieties, I would advise several white ones, for although all are nearly alike in appearance, the season of flowering is different, and if planted together the same flower seems in perpetual bloom. The same is true of the red varieties—(not including the Clematis coccinea, which does not harmonize with the others.) My favorite of all is the lovely lavender-colored Mrs. Bateman, and the Blue Gem is almost as fine. The Rubella, Viticella, Rubra Grandiflora, and Madam Grange, are of a fine red or claret color, the Jackmani, a radiant royal purple, but a coarse loose flower when closely examined, and the Velutina purpurea, which is like Jackmani, except that it is almost black and of a very velvety surface.

If these suggestions are found of use I will add a few more before the plant-

ing season opens, hoping to stimulate the cultivation of what is so perfectly within the possibilities in our climate, and capable of results which enrapture and surprise those who see them in their beauty and profusion for the first time.

January 22nd, 1886.

GIVE US YOUR EXPERIENCE.

(For the Canadian Horticulturist.)

It is some time since that I, partly in deference to the nod of the chief of the Horticulturist's staff, and partly to gratify the chronic *cacæthes scribendi*, prepared a paper on the "Advantages and Art of Fall Planting of Trees," &c., &c. In the order, or disorder, of events it was mislaid and could not be found nor leisure had to prepare another, the author not being blessed with a brain as fertile as that Spanish prodigy. Lope de Vega, who could write a five-act play of Shakesperian power before breakfast. So the public have been permitted to sleep on in their accustomed and sinful arboreal apathy. Just a few days ago the missing "copy" was found together with the aforesaid "Nod" snugly embowelled in its folds, like precious and embalming spices. But no antiseptic could prevent it from becoming unseasonable, a sort of post mortem affair, for the Frost King had long since invaded Flora's domain, striking down first the loveliness which stood nearest the "picket line" between autumn and summer, and then with brumal din, rush and clash of storm and tempest, swept all before him. "But the Nod. What became of the Nod?" O! that was what an evergreen, fresh and flourishing, and as potential as ever. The Secretary has more than once explained that the trees and plants distributed among its members were so distributed to ascertain their hardiness, productiveness, profitableness, as adju-

vants, to increase the comfort, refinement, and happiness of every Canadian home. In this sense it is a patriotic task, but though patriotic it is not self-sacrificing, for it is discharging a debt contracted by accepting the gifts on the condition of publishing the experience. It is not self-sacrificing because it is one of those labors which carry their rewards with them. Who has not felt the fascination which holds the mind in delightful captivity as it watches the development of the useful and beautiful in fruits and flowers? I for one cheerfully obey the kindly behest of the Association to report, but firstly beg to wedge in a short paragraph on

REPORTING.

The Association is not a speculation, not a *Credit Mobilier*, an institution of hawks to capture pigeons, that it invites the marvellous—the report *ad captandum vulgus*. The Fruit Growers' Association is none of these, but a *community of mutual teachers and learners*. It therefore wants facts in the form of experiences, most of all, plain, broad-footed, brawny-handed, and proletarean, if you like, on the one hand; on the other, scientific, but cautious; æsthetic, but ever rational, whilst exploring the realm of the beautiful. Again, it solicits *all the facts* affecting the experiment; not a one-sided array to parade a pet theory or thing, but both sides. The witness not in court may be the very one required to complete the chain of evidence. The stereotyped expression, "in my grounds" such a grape mildewed, or such a pear blighted, although a fact, and therefore of some value, is not sufficient. We know, theoretically and practically, that differences of results are mainly due to differences of treatment, climate, soil, position, each one of these facts adds to the value of the other in a cumula-

tive ratio. The problem cannot be solved except by the use of all the factors. Yet how rarely are the factors given. A simple statement of success or failure, little more. One gratifying exception to this will be found in the *Horticulturist* for December, 1885, under the caption "Grapes—a Review." That review is admirable for the fullness of data.

Let us glance at a few of the agencies which more or less modify results or quite baffle our efforts in plant culture. Climate, which may be said to include locality, aspect, altitude, protection, air draughts, vicinity to swamps and small bodies of water. A little body of water to tender plants is what Pope says a defective education is to the mind. "A little learning is a dangerous thing." So are swamps and small bodies of water. Here, also, will come in barometric pressure, per cent. of cloudiness, sudden extremes. These in summer, more especially, affect development and quality of fruit, in autumn the ripening of the sap, and consequently hardness of the plant to withstand the winter.

Then again the soil and drainage, heavy or light, close or porous, argillaceous, calcareous or arenaceous, and so on. I may almost say *ad libitum, ad infinitum*. There is scarcely a plant known to horticulture that is not partial to some certain soil and climatic conditions, more or less differing from the wants of nearly every other plant. There is scarcely a defect or difficulty hinted at above that may not be sufficiently mitigated or overcome for all practical purposes by the art of the skillful cultivator. The facts and experiences which create that skill it is the object of the Association through its reports and through its organ, the *Horticulturist*, to place in the possession of every Canadian who, however luxuriously he may be—*recubans sub*

tegmine fagi—may add to that primitive pleasure the still greater one of "sitting under his own vine" and apple tree, and snuffing the fragrance of his own flowers, or yet, most gratifying to some and acceptable to all, say with Iago :

"Go to, put money in thy purse."

Now for all this we must have each other's experiences. The *Horticulturist* can give generals, but the particulars, the peculiarities, the idiosyncracies of plants and places, can be obtained in no way but by the members reporting carefully, concisely, and fully.

Milton, Ont.

S. P. MORSE.

THE CURRANT BORER.

Is there nothing that can be done to fight the Currant Borer? Of late I have been training my red currant bushes on a plan I found in a book I brought from England entitled *Mulum in Parvo Gardening*, or £620 annual profit from an acre, by Samuel Wood. His system was to get upright rods as soon as possible, then top them, and the laterals that grew during the summer were to be cut back in the fall to one or two eyes, the same as many adopt with their grape vines, and he (Mr. Wood) maintains that this is the right pruning for the red currant and that they will bear immense crops.

On this plan I trained my bushes last summer, but when I went to cut the laterals in the fall I found the borer had made three and four holes in many of the rods, and as the only remedy, even in Mr. Saunders' book on insects, is to cut the wood away, I did cut it away and spoiled all my plans. Two bushes of Fay's I had to cut almost to the ground.

Now, Mr. Editor, can you not suggest a remedy, or perhaps some of your subscribers may have a remedy which

they could give through your valuable *Horticulturist*.

London, South.

E. ROBINSON.

NOTE BY THE EDITOR.—Unfortunately we have never heard of any other remedy than that of cutting back the rods of the currant bushes far enough to secure the worm, or larva, which will be found in the pith, and burning the cuttings and thereby killing the larva that may be in them. This is a very unsatisfactory proceeding, and makes very slow headway against the enemy. It is very much like burning up one's currant bushes in order to get rid of the borer. Can any of our readers give us something better? Has any one tried any other method?

GOOSEBERRIES.

I was much pleased to see the illustration of the "Industry" gooseberry in the December number. This is a fruit of which I am fond, and I am fully convinced that if it received that care and attention which it merits, it would in suitable soil prove the most profitable of our small fruits.

I have cultivated for the last twelve years the following English varieties, viz: Whitesmith, Ocean Wave, Red Warrington, and Crown Bob. They have yielded enormously, and have never shown the slightest signs of any mildew.

Last year I imported twenty-two other English varieties, which I intend testing, and will select such as are suitable and give satisfactory results.

My garden is a stiff clay, rendered friable by coal ashes and plenty of stable manure. From my own experience and that of others who have cultivated the English sorts in this neighborhood, I

am persuaded there is little fear of mildew on a clay or clay-loam that has been well drained, provided the plants or bushes are kept in a good healthy, growing condition, by being liberally mulched with manure, and that care is taken in digging or stirring the ground around them not to injure the roots. With kindest wishes for an increased circulation for your valuable periodical.

A. MORTON.

Brampton, 16th January, 1886.

RASPBERRIES—BEST MARKET VARIETIES.

Souhegan and Tyler are now the leading early Black Caps. They are strong growers, and probably more productive than the older early kinds.

Next comes the well known reliable Mammoth Cluster for the medium season. The fruit is very good, though not so large as some others.

Last and largest comes the Gregg. The fruit is very large, firm and dry. As a fruit cannot well be firm and juicy, and at the same time melting and juicy, the quality of the Gregg is not "best." It fills the basket and the can, and does not shrink much in drying. So long as the consumers do not object to its quality, the growers need not do so.

Although the Gregg is a strong grower, it forms very weak tip plants, many of which must be rejected. Good plants of this variety cannot, therefore, be propagated as cheaply as those of most other Black Caps. The fruit of the Gregg adheres to the stem so firmly that the whole crop can be gathered in a few pickings. Some one has intimated that the Gregg is unsuited to a sandy soil. Upon such a soil I grow berries that astonish experienced fruit dealers. Many persons do not recognize them as Black Caps.

After growing many varieties of red raspberries by the acre for some years, I can only recommend the Cuthbert.

I have an acre and a half of this variety in full bearing. I never lost any Cuthberts by winter-killing, but a portion of my patch was "shortened in" pretty severely last winter. Enough wood was left to produce a full crop of berries. The Cuthbert is a strong grower and transplants remarkably well. It produces a large crop of large, firm fruit, of a good flavor and good color. It takes several weeks and many pickings to gather all the fruit. It extends the raspberry season, and for ten days at the end has no competing red raspberry. An early raspberry as good as the Cuthbert is called for.

The Highland Hardy is a small grower and small bearer of small, soft fruit.

The Hansell is worse in nearly all respects.

The Marlboro' does not promise very well in any respect, but we will know it better after another year's trial.

The Brandywine, Turner, Clarke, Philadelphia, Herstine, and others, are mid-season berries.

The Brandywine is a dwarf grower, hardy, and produces fair crops of very bright, medium sized, firm fruit, of very poor quality.

The Turner is a fine grower, and one of the hardiest kinds. It gives two pickings of nice looking, medium sized, softish fruit, of excellent quality. The later pickings give softer and smaller fruit, and less of it.

The Clarke gives large, bright, soft fruit, that produces prompt spontaneous jam. Sometimes the canes get discouraged, and die just when the fruit ought to ripen.

The Philadelphia has several good points. It does not incline to sucker. It yields immense crops of dark-colored fruit of good flavor. It is good for canning and for raspberry vinegar, though it cannot successfully compete with the brighter kinds in the market.

The remarks that apply to the Philadelphia apply to the Hybrids also.

For home use the Saunders and Shaffer's Colossal ought not to be overlooked.

The Saunders gives a very rich color to vinegars made from it.

At the present time the Gregg black cap and Cuthbert red raspberries stand head and shoulders above their competitors. The market grower who plants mainly these two varieties, acts wisely so far as we can now know from the experience of the past. Ideal varieties very much better than these exist in many human heads. When they manifest themselves in the "fruit," let us all rejoice.

E. MORDEN.

Niagara Falls, South, Ont.

REPORT ON FRUIT IN LAMBTON COUNTY.

(Continued from Page 41.)

BY B. GOTT.

THE CHERRY.

This fine old fruit also is becoming rather shy of profitable results in our conditions and management. The better sorts, as those of the old English and other foreign kinds, with us will always be scarce and in poor supply, as there is a growing feeling that our country is not suited to them; and this feeling is becoming very strongly rooted in this county. The old Red Virginia or Kentish Red, known here as the old Red Sour cherry, is the only one that we can grow with anything like a decent success; but if the Black Knot attacks our trees as it does in some other portions of the Province, then we are totally done as to cherries. Plum and pear conditions of soil and climate are not suitable conditions for cherries. They need a something that is not found in our county, and consequently they are not at home with us. The markets and prices are good, if we could only get the fruit. The birds are our best

consumers, but not the best paying customers.

THE QUINCE.

This fine fruit is growing in popularity, and there is now a demand for it in our markets that was not known a few years ago. I believe it to be one of those fruits the demand for which will very largely depend upon the culture and fine tastes of the people. I saw some very fine samples brought into the market this year, grown on rather damp, loamy soils, where they appear to do well. The sort cultivated is mostly the Orange Quince, and the prices are pretty good, but not sufficiently so to warrant a very large culture.

THE PEACH.

Owing to the severity of our past winter our crop of this very popular fruit was totally destroyed. Our conditions on the whole are not good for the producing of peaches, although we have, in years past, grown some large crops of very fine fruit. But it is not now with us as it once was, and as in the case of plums, we have very largely to regale ourselves with the thought of past enjoyments. For the last four or five years we have had no crop, and our people in their faithlessness refused to plant any more trees. Last spring one gentleman recklessly cut down a fine promising orchard of peach trees and cumberers of the ground, but I believe he is sorry for it now. Of course it is discouraging enough, but we must ever hope for the best. The trees have done remarkably well this year; the growth made and the fruit buds matured are cheering, and well calculated to stimulate our hope for next year.

GRAPES.

This crop is exceedingly promising and is rapidly growing in popularity. The plants are so hardy, so easily managed, grow so rapidly, and produce so abundantly, that our people plant them

with the greatest confidence. Then again, the fruit in its improved forms is one that everybody likes, from the smallest child to the gray-haired grandfather. It is so readily made up by the family into savory dishes that every housewife wants a supply, be it ever so small. Almost any family can grow them that has only a few square rods of soil. Our conditions over this county are remarkably favorable, and the produce, where the vines are properly cared for, is very great. A good apple region is a good grape region, yet grapes will sometimes do well in regions where apples will not. There are but few difficulties in growing grapes, but few rots or mildews but what are easily controlled. And then the best of all is, we have the power to protect the plant and the crop from the severities of our winter seasons, and so ensuring our crop of fruit. This is done by laying down on the ground before severe frost sets in, and although people are sometimes afraid of this trouble, yet it is very easily done. This season's crop has been very large and remarkably fine; almost all kinds doing well all over the county. The most popular variety here is still the old substantial Concord, that has done more good service for us in this country than any other sort. This season we fruited Worden's Seedling and Moore's Early, though not much difference in them, yet they are both very desirable sorts, and should be largely planted for their earliness, being about ten or fifteen days before Concord this year. On account of our cold and backward season all sorts were very late in ripening, being nearly two weeks later than usual, but still in due time they ripened up very nice. Lady is a beautiful grape, and Jessica is also promising, but in our opinion the Brighton is worthy of very extended culture as a popular amateur fruit. The vine is hardy and

very prolific, and the fruit is possessed of so many fine qualities that it is difficult to surpass it. There are so many excellent kinds, all possessing one or more good points, that it is hard to say just which is the best. Any of them are good, if properly attended to, and will amply repay the labor and pains spent upon them. The crop being so large this year our markets were filled to a surfeit, and the prices in consequence went very low, but still on account of the quantity the results to the growers were very satisfactory, and paid as well as any other fruit.

RASPBERRIES.

We are yet scarcely sensible of the extent to which the culture of this fine fruit may be carried. The fine new sorts, almost every year brought out, serve very much to strengthen the industry, until it is no uncommon thing to see acres of them in continuous culture. The ease with which the young plants can be procured, the rapidity of their growth, the ease of cultivation, the quantity and beauty of the fruit, and its ready reception in almost any market, all tend to make the raspberry an increasingly popular favorite amongst all classes. Much of our county is by nature well formed for extensive and successful growth of this fruit. Many acres have been grown in an uncultivated state, the fruit from which was very beneficial to the early settlers, and the remembrances of these gatherings is yet pleasing. But as the advancing farmer approaches these "patches," they immediately disappear, and the place thereof is taken to grow other crops for other uses. So we have to rely upon the new plantations of improved kinds for our daily supply. These are planted out in the spring of the year in rows six feet apart, and the plants three feet in the rows, and cultivated as for corn, and the crop, when in good bearing, will run about 2,000 to 3,000 quarts

per acre. The kinds planted are various and are divided by color of fruit, as reds, blacks and whites; of the reds the Turner and Cuthbert are the best, and are very popular. Mammoth Cluster is best of the blacks. This season the crop was large and prices ran down pretty low, but still a good margin was realized. On account of the greatly increasing quantities used, the markets will always be glad to receive even the largest crops at very fair prices.

STRAWBERRIES.

Our county is found admirably adapted also for this princely fruit. They are raised on our soils in greatest profusion, and in the highest style of size and quality. One grower, near here, had about six acres and 16,000 quarts this year. His crop was one of the finest strawberry sights witnessed in the county, and realized him almost "a fortune." The kinds grown are various, all apparently doing well; but the Manchester, James Vick and Daniel Boone, are decidedly excellent, and in their behavior leave nothing further to be desired. The crop this year was immense, both in quantity and quality, and although it was very late before the crop came in, yet, in the end, gave the greatest satisfaction to all concerned.

GOOSEBERRIES.

Many sorts of this old popular fruit are grown and with very large success, although this year, being so cool and wet, they were much attacked by mildew and rust. The crop was large and tolerably fine, the demand in the markets good and prices fair. The kinds mostly grown are Downing and Smith's Improved, both good sorts.

CURRENTS.

This old and popular fruit is also grown very largely in all its variations of red, black and white. A better and more generous culture is securing much

better results than formerly, and more satisfaction is given. Of the reds, Raby Castle and Cherry are good. Of blacks, the Naples and Lee's Prolific are recommended. Of whites, White Dutch and Grape are best, and all find a ready market.

BLACKBERRIES.

The growth of these is something amazing, and the crops, in favorable seasons, immense and beautiful. It is one of those fruits that are always acceptable, and of which we can never get enough. The product is pretty good, and the market prices excellent. Snyder and Kittatinny are best sorts, and give the best returns.

NUTS.

The native nut crop this year is generally very large over the county and very fine. The best nuts for popular use are the Hickory, Walnut, and Butternut, with Chestnuts and Beechnuts.

Arkona Nurseries.

APPLES, GRAPES, AND STRAWBERRIES.

We had a good crop of apples the past season and got \$1.25 per barrel for them. Our late grapes were all frozen.

I see there has been some discussion as to whether the strawberry is best grown in rows or hills. I used to plant them in rows that were three feet apart and the plants ten or twelve inches apart in the row, and when the rows got too wide I hoed the outside of them and in this way I have had them as good as ever for nine or ten years.

You deserve great credit for the way you have got up the annual report. Those who do not get it miss a great treat for the saving of so little money.

WILLIAM BROWN.

Annan, Co. Grey.

GOOSEBERRY IMPROVEMENT.

SIR,—A good article by B. Gott, of Arkona, in *Rural Canadian* moves me to send to the organ of our fruit growers a paper on the same subject.

The article alluded to deals with the improved American gooseberries, and says that no good results have followed crossing with the English sorts.

Deep rich clay loam and much trouble and care are needed in order to secure reasonably long life.

I think, however, that our few and middling garden kinds must have resulted from crossing the native with the English, but that the mother selected was one of our swamp berries, of low, weak, spreading habit; fruit smooth yet deficient in flavor, size, and sweetness, whereas had the other wild type been chosen for crossing or improvement we might not now have had to complain that of all our fruits the gooseberry is the poorest.

The taller sort of wild gooseberry is very frequently prickly or even spiny, but is sometimes almost or quite smooth, and the flavor very fine.

Last summer I found a bush bearing smooth good sized fruit, sweeter and richer than any English kind I have met with, save one or two.

Were our best tall-growing upland natives crossed with suitable European sorts we might expect what has not yet been attained, plants adapted to our climate, fit for any soil, permanent, needing little care or training, averse to mildew, and bearing large crops of high-flavored, good-sized fruit.

From your remarks in *Horticulturist* I am pleased to know that Mr. Dempsey, Mr. Saunders, and others are moving in this direction, and that a few years may bring about a great reform in the fruit.

Our generally rough natives are so excellent for preserves that long ago in

the United States the fruit was named the "Jam Berry," and if for no other reason deserves to be saved from the extinction which in case of so many wild plants follows the clearing off of our woods.

As an instance of the permanence and reliability of our upright growing natives, I may state that when the country was new, after trying many English kinds and throwing them away, I got into the practice continued fitfully till the present time, of marking the better specimens in harvest and lifting them in the fall, by which means I obtained in a couple of seasons a large plot of bushes four feet apart.

Without any care most have borne fruit for more than 25 years, and some plants are 6 to 8 feet high, so that one can place a chair under and sit to pluck or eat the fruit.

The native gooseberries are not absolutely free from mildew, though it is the exception, and not the rule as is the case with the English sorts in most situations.

Cuttings strike with much difficulty, but layers take readily and soon make fine roots; transplanting in the fall never fails. They are continued by a natural system of renewal. Almost every year tall straight twigs grow from the crown of the root, and in the next season these form side branches, which next year and for several years bear fruit. Pruning merely consists in reducing the number of these young stems, and in removing old ones occasionally.

The varieties are innumerable, as each district has its peculiar sorts:—Small, large, rough, smooth, sour, sweet, green, red, in various shades, rusty, purple, almost black, shining or with a bloom.

While doing well under cultivation, there is little or no improvement in size or quality of fruit thereby, and

from seed of the largest and best I have never obtained offspring worthy of the parents.

Crossing and hybridizing might give better results. J. CUPPAGE.

CRAB APPLES.

MR. EDITOR,—This last two years past you have been silent on our somewhat despised *Crab Apple*. Have you no plea for them. They are among apples our truest friends here in the cold north. Can you not name five or six good dessert kinds, and good keepers. I feel that we are losing time to neglect those valuable fruits. Why not improve those that do so well in the north, for, at most, all I know of the Russians they are not of first quality and not good keepers? Now, Mr. Editor, are they too mean a fruit for your notice; have you nothing in their favour? They have proved the hardiest apples we have; and though hardy, they want care and looking after. I find all over the borers are at work, and many wonder they die. I have dressed my trees as per receipt in the July number, 1885, and believe it will answer admirably if done once or twice each year. For grafting, I find it advisable to take the cuttings off in the fall and partly bury them, because they are often so badly hurt by our severe winters as to be doubtful to grow when grafted, if cut in the spring. I find this so, even with the Duchess of Oldenburg; last year I find it is with me, as it was with J. P. Williams, in July number, 1885. It will not grow well when top-grafted; in fact, I could never make a tree of the Duchess when top-grafted. Now, dear sir, is it the same with all the Russians? Will the Yellow Transparent do well when top-grafted? Can you tell me this, as I do not wish to lose or waste time?

Muskoka.

T. A. H.

SOME NEW BERRIES.

(For the Canadian Horticulturist.)

DEAR MR. EDITOR,—With your permission I would give the readers of your excellent monthly a notice of some of the new fruits that will be eagerly sought for by some and made little of by others this coming spring. As you are aware, sir, the strawberry is my favorite of the small fruits. Hence it will be the first I notice.

The Jewell. It has been before the public for some time and the only one that has been sent out for testing in different localities, and has given satisfaction wherever sent. No lover of the strawberry need be afraid to invest in a few dozen at the price asked for it. This variety is from Connecticut.

It is reported of the Jewell that from 1-22d of an acre 687 quarts of berries were picked besides what was picked by visitors. It is supposed it would yield 500 bushels per acre.

It is an old saying, sir, "when it rains it pours."

2nd. *The Belmont.* Origin Massachusetts. This variety, unlike the former, has come like the lightning flash, unannounced, and fruitmen are led to ask when will this production of new fruits end.

The following notice of the *Belmont* I had from the introducer. He says as a cropper we cannot say too much in its favor. From scarcely a quarter of an acre we realized the net sum of \$596 or \$2,384 per acre. What does my friend of Lakewood think of that for I presume neither of these men followed the *slip-shod* plan of growing the strawberry.

Then, sir, the next wonder comes from Illinois. *Butach's No. 5.* This is only \$5 per dozen, and if all that is said about this "wonderful" (may be it is the "Big Bob") berry is only half true, nothing I have yet grown can

compare with it for size, earliness, and fruitfulness. I have grown almost every variety introduced since 1872.

There are two other varieties that I have grown, namely, May-King and Ontario. May-King is early and Ontario medium. I am satisfied whoever gives them a fair trial will not regret the outlay.

The next wonder is in the raspberry line. It is the *Earhart Everbearer*, black. This also comes from Illinois. Well, Mr. Editor, I am dull in apprehending when the third season of bearing of the *Earhart* begins.

The first two I can understand, and knowing that you can see into these mysteries better than most men, would you please tell when the third term of ripening the berry begins and ends. In the fall of 1885 we had quite a supply from the young canes of Shaffers till October.

The next great novelty is a black-berry that has been through a gradation of names such as "Topsy," "Uncle Tom," now "Erie." The stock amounts to 6,000 plants; it has got into the hands of ten men who have each a share at \$500 a share. These are all prominent fruitmen, and know how to handle the business.

My brother fruitmen, please go slow on these two novelties till you know more about them.

J. L.

Granton, Jan. 26th, 1885.

GOOSEBERRIES.

Gooseberries are a very profitable crop to grow for market. They succeed best on a good strong loam, and will well repay good cultivation.

Unlike other small fruits, they are ready to gather for market as soon as they have nearly got their growth and continue to get better until they are fully ripe, thus giving several weeks in which to gather and market the crop.

The usual custom is to use them before they are ripe for canning purposes, and comparatively few ladies have ever tried them when fully ripe for that purpose.

To my taste there is just as much difference between ripe and unripe gooseberries as there is between ripe and unripe peaches.

By using the light colored varieties such as Smith's imp. and Downing when fully ripe with white sugar, they will make a very light green colored fruit, which looks very nice either in the cans or on the table, the juice all forms into a jelly, and makes one of the finest canned fruits we have.

VARIETIES.

English varieties are very subject to mildew.

White Smith is the best I have seen among those well tested in this country. While the bushes are young, (if planted on clay loam and given good cultivation) they are quite free from mildew. The fruit is very large, of a greenish white color, good quality, very productive, and a good strong grower.

Crown Bob is a poor grower with me, fruit very large dark red, quite hairy, of good quality.

Industry. The fruit is quite similar to *Crown Bob* in appearance, but a little larger, and the bush is a good strong grower and productive, but like all other English gooseberries it will mildew in many places, although it is much less liable to mildew than *Crown Bob*, and many other English varieties.

American Gooseberries are what we will have to look to for our standard market sorts.

Smith's Improved is the best and most profitable of any that I have seen, it is large, light green, good quality, hardy, a strong grower, and very productive.

The only fault I have seen with it is

that it will crack if left to get a little over ripe.

All things considered, I believe it to be the most valuable gooseberry that has been fully tested, for this country, either for home use or market.

Downing, fruit large very good, light green, a strong grower, not as productive as Smith's Improved, nor as hardy, mildews with me on sandy loam, but not on clay loam. Not easy to propagate from cuttings, requires to be layered.

Houghton has been more largely grown than all other varieties; it is small, red, very productive, and when grown on young healthy bushes, on good strong soil, and good cultivation, it is of quite good size.

It is so hardy and productive that it is still a very valuable sort for market.

W. W. HILBORN.

Arkona, Jan. 30th, 1886.

WINTER-KILLING OF THE ROOT.

MR. EDITOR,—Allow me to add something to the practical and sound advice of our old and esteemed friend, Mr. A. M. Smith, of St. Catharines, given in November number of the *Horticulturist*, on the subject of prevention of root killing of fruit trees and vines by exposure to extreme cold during winter. It appears to me that if Mr. Smith had first explained the reason of the injury more definitely before giving the preventive, his already able article would have been still more effective in moving our fruit growers to action in making use of his advice in the matter. In our experience and observation in the matter of grape root killing, we have noticed that those varieties, the roots of which are most fleshy and less fibrous and wiry, are more susceptible to injury in cases of exposure to sudden freezing and thawing, from the very fact that the cell structure is more easily broken. Just

as we find the potato more easily destroyed than the apple by freezing and thawing on account of the lack of tissue or fibre in its cell structure, so we find some varieties of fruits of all kinds more subject to injury from the above mentioned cause than others on account of the difference in the cell structure of the root. Of course the varied conditions and situations and exposure, all go to give different results and degrees of damage. For instance, in grapes we find the Niagara root very fleshy and with very little fibre, so much so that when we were ploughing to our vines last fall great bundles of Niagara roots would gather on the plough coulter and when taken and bent between the fingers would snap off in pieces half an inch in length without any sign of fibre, while some other varieties with tougher and more wiry roots could scarce be broken at all. Now it is quite generally known that when apples, potatoes, or any other vegetable with such lack of tissue or fibre are frozen, that if the process of such freezing and thawing is allowed to occur rapidly, then the cell structure is sure to be much worse injured than if allowed to freeze and thaw more slowly. If this be true theory, then our friend's advice is just the remedy, or rather preventive, of the injury such roots are subject to. And according to the old adage, an ounce of prevention is worth a pound of cure. So fruit growers generally will find it much to their advantage to protect such tender rooted varieties by covering the roots to a distance of two or three feet around the base or trunk of such trees or vines with coarse manure, or by sowing rye thickly about the them in September, after first ploughing to them (as our friend, Mr. Smith, has advised), and thus prevent injury by retarding the process of freezing and thawing. For if the cell structure once becomes broken, then the passage of the sap

must be obstructed, and consequently the vine must die. In case of such winters as the present one with us with little or no snow, and more or less sudden and severe freezing, and just as rapid thaws, any trees, wind-breaks or obstructions to prevent snow from blowing off are of little account, and we must resort to covering our vines, or be in danger of losing many of our choice varieties. And at the same time we find by experience on all heavy lands other advantages from such covering, such as in the case of rye, as spoken of above, when ploughed under in the spring tends to keep the soil in an open and porous condition, as well as to add its fertilizing properties as a manure to the soil. It also tends to keep the ripe fruit, especially grapes, from becoming dashed with mud in case of heavy showers in the fall. And when manure is used it also gives the two first advantages as the rye, and helps to lessen the work of the first digging or hoeing in the spring by keeping the soil from baking. Deep planting is also another remedy for grape root freezing, where it can be done without being subject to standing water in the soil. And, of course, no tree or vine can be expected to live and prosper in wet soil. If you think the above of any use to your readers, use it, and if not, let the waste basket take it.

I am, yours respectfully,

J. TWEDDLE.

Stoney Creek, Ont., Jan. 18, 1886.

GOOSEBERRIES.

DEAR SIR,—When I purchased the property on which I now reside I found quite a number of what is known as English gooseberry bushes. I also found I could get no fruit off them; mildew they would in spite of sulphur, salted hay, etc. So two years ago I dumped about a bushel of ashes from

the coal stove around one of said bushes and was rewarded with a full crop of fine berries from it. Last winter I served half a dozen more bushes the same with like results, and this winter shall continue the practice.

GLADIOLUS.

A few years since I procured half a dozen of the more costly and finer kinds of Gladiolus, such as *Africana*, *B. B. Coutts*, *Cameleon*, etc., but they would not increase as the more common sorts, and after three years planting I just had the same quantity I commenced with. So last spring I cut them in two, with an eye in each half. I found they bloomed just as strong and I doubled my stock.

I have the best success with the following mode of culture. I may say that my soil is sandy with gravel subsoil so that it is perfectly self-draining. First, I prepare a sufficient quantity of compost, fully one-half well rotted manure, then dig a bed of required size to accommodate what bulbs I have, a foot deep, filling the same 8 inches with the compost and press moderately firm, then set the bulbs on top of the filling about 6 inches apart, then cover the bulbs with 3 inches of pure, clean sand, and fill the remaining inch with some of the top soil dug out, scatter the balance over the garden. I have raised bulbs 5 inches in diameter perfectly free and clear of blotches, scabs, etc., with bloom to correspond.

I am, yours,

J. S.

St. Thomas, Jan. 1886.

BURNET GRAPE—CORRECTION.

In the account given by me of grapes grown in Muskoka, in January number, 1886, page 9, I gave the wrong name to the vine received from the Fruit Growers' Association, it should have read *Burnet*, not Moore's Early.

F. W. COATE.

BOOKS, &c.

Schedule of Prizes offered by the Massachusetts Horticultural Society for the year 1886; competition open to all. Robert Manning, Sec., Boston, Mass.

Illustrated Catalogue of the Joseph Harris Seed Company, Moreton Farm, Rochester, N.Y. 1886. Flower and vegetable seeds sent prepaid by mail.

The Canadian Breeder and Agricultural Review is published weekly in the stock and farming interests of Canada, corner Church and Front Streets, Toronto, at \$2.00 a year.

Nellis' Floral and Garden Instructor, 1886, a descriptive catalogue of vegetable and flower seeds for sale by the A. C. Nellis Company, Canajoharie, N.Y., profusely illustrated.

J. A. Simmers' Seed Catalogue and Cultivators' Guide, 1886, Toronto, 147 King Street East, is very abundantly illustrated, containing also a select list of grape vines, roses, gladiolus, dahlias, etc.

The Canadian Science Monthly, devoted to the interests of Canadian Naturalists, and the popular study of the natural sciences, is published by A. J. Pines, Kentville, Nova Scotia, at 50 cents a year.

Peter Henderson & Co's Manual of Everything for the Garden, 1886. A handsomely illustrated descriptive list of flower and vegetable seeds, garden and farm implements and flowering plants. Nos. 35 and 37 Cortlandt Street, New York.

Descriptive Catalogue and price list of Sibley's tested seeds, 1886, Hiram Sibley & Co. 179-183 East Main Street, Rochester, N.Y., and 12-14 North Clark St. Chicago, Illinois. Contains also a list of Summer flowering bulbs, plants, roses, small fruits, implements, etc.

W. W. Hilborn's Catalogue of small fruits for spring of 1886, Arkona, Ont. An unusually liberal offer of new and choice grape-vines, raspberries, currants and strawberries, together with the *Canadian Horticulturist* for a year, will be found on the fifteenth page of this catalogue.

Third Annual Report of the Board of Control of the New York Agricultural Experiment Station. This report is full of interesting results of experiments in feeding, in the germination of commercial seeds, nomenclature of garden vegetables, classification of peas, testing varieties of potatoe, etc. etc.

Report of the Entomologist, James Fletcher, Esq., Department of Agriculture, Ottawa, Ont. Mr. Fletcher will be gratified to receive communications from all parts of the Dominion in reference to insects injuring crops of any description, also small packets of insects for identification, which may be sent postage free if addressed to the Entomologist of the Department of Agriculture, Ottawa.

The Horticultural Art Journal, published by Mensing and Stecher, Rochester, N.Y. every month, at \$3.00 per year, is devoted to disseminating a correct and faithful representation by means of colored lithograph plates, made from nature by skilful artists, of new and meritorious productions of the nursery, seed garden and green-house. Each number will contain four colored plates, accompanied by a careful description of the appearance, merits and qualities of each subject. We trust this new venture will meet with the support which such an art journal most richly deserves. The first number contains very beautifully executed plates of Marshall P. Wilder Rose, Shipper's Pride Plum, Rancocas Raspberry, and Niagara Grape.