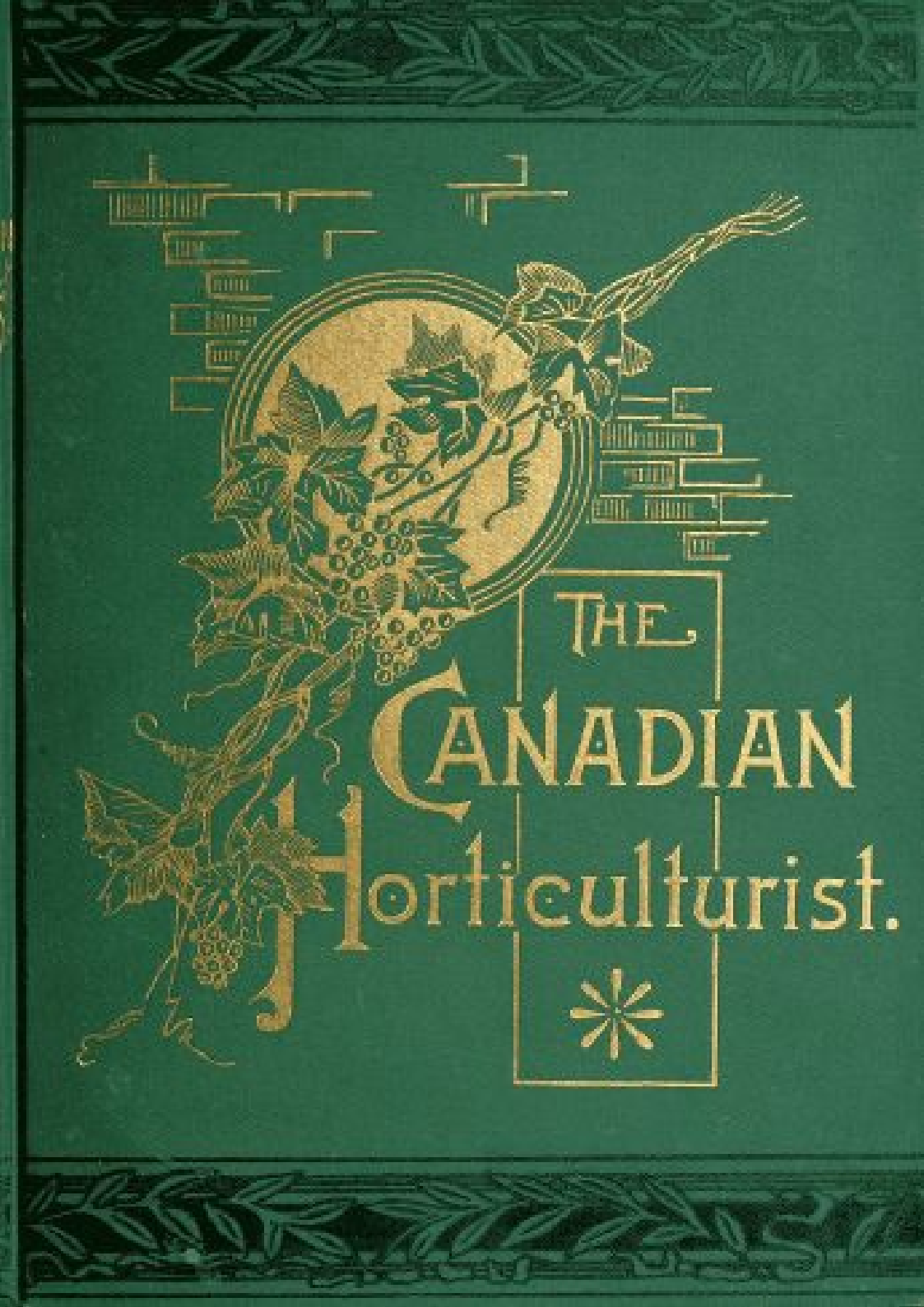
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Vol. 7, No. 11

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DEUTZIA CRENATA.
PAINTED FOR THE CANADIAN HORTICULTURIST.

THE

Canadian Horticulturist.

VOL. VII.] NOVEMBER, 1884. [No. 11.

THE DEUTZIAS.

These beautiful shrubs have been introduced from Japan. They belong to the natural order Philadelphaceæ, of which our common Syringa or Mock Orange is the type. They have been regarded by most botanists as generically distinct from the genus Philadelphus, and received their present generic name in honor of an amateur botanist of Amsterdam, who was also a sheriff, one J. Deütz; but some botanists think that they are not generically distinct, notably Mr. George W. Johnson, editor of the *Cottage Gardener*, who says, in his "Gardener's Dictionary," that he believes they are only different sections of the same genus, and that he expects that some of the species of each will yet cross with each other, and so prove the correctness of his view.

Deutzia scabra is the strongest grower of them all, rising to a height of from ten to twelve feet in rich soil, and with a corresponding breadth. The leaves are coarse and rough, being covered, on the underside especially, with silica, and in such abundance that the Japanese use them for polishing. These siliceous bodies form a very beautiful object under the microscope when viewed by reflective light. This species is a most profuse bloomer, yielding pure white flowers, which are borne on long spikes. If the old wood be cut away after flowering, and only the new growth allowed to remain, the shrub will be kept in much better shape and present at all times an ornamental appearance.

Deutzia crenata, flore pleno, is well represented by the colored plate which illumines this number. In habit of growth it strongly resembles the preceding, but is not quite so robust. The flowers are borne on graceful panicles of considerable length, are very double, pure white on the inner surface of the petals, but having the outer surface suffused with bright rose. This species also appears to much better advantage if the flowering shoots are pruned away after the season of bloom is past.

Deutzia gracilis has been so named from its very graceful style of growth. It is the smallest of all the species, and a general favorite. When covered with its pure white flowers it is a most charming object. It is frequently used by gardeners for early spring forcing in a cool greenhouse. Mr. F. J. Scott, in his "Suburban Home Grounds," says that he can remember no church decoration so charming as the wreathing and bordering of the pulpit and altar of a chapel decorated almost exclusively with the pendant racemes of this species intermingled with green leaves. When well grown it will attain to the height of three feet, with nearly as great a breadth.

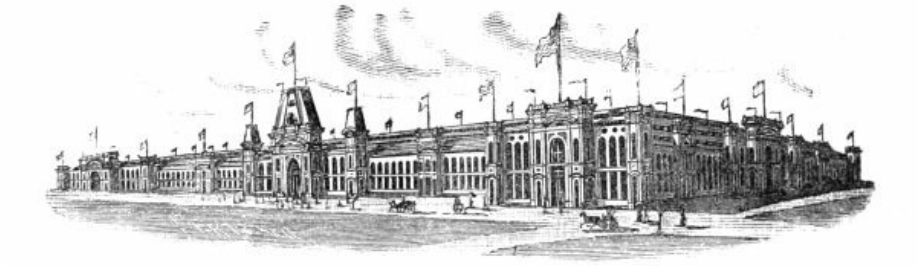
These are the species most commonly grown, and they are well worthy of a place in any selection of choice flowering shrubs. There is a white double flowering variety of *Deutzia*

crenata, known as *D. crenata flore alba pleno*, which has not any pink or rose color upon the outerside of the petals. This variety is also very handsome, making a pleasing contrast when planted near its rose-tinted relative. Johnson's gardener's dictionary mentions a red flowered species under the name of *Deutzia sanguinea*, but we have never seen it, nor do we ever remember seeing the plant offered for sale in any nursery catalogue.

These Deutzias have a good reputation for hardiness, but we can not yet say how far to the north in Canada they can be successfully grown. Quite a number of the *D. crenata* were disseminated by the Fruit Growers' Association to its members last spring, and we hope that before long they will report through the *Canadian Horticulturist* whether they endure our climate in the sections that are colder than the county of Lincoln.

NEW ORLEANS EXHIBITION.

This promises to be one of the greatest Expositions that has yet been held. We give a description of the main building, with a cut showing the front and one side.



MAIN BUILDING.

The main building is the largest ever erected. It is 1,378 feet long by 905 feet wide, without courts, and has a continuous roof composed largely of glass so arranged as to afford an abundance of light without subjecting the interior to the direct rays of the sun. Within, the view is unobstructed. From one side or corner of the building to its opposite, the interior showing all the phases of industrial activity is seen. There are no partitions, and the lofty pillars, wide apart, supporting the roof structure, present no impediment to one's vision, but only serve to assist the eye in measuring the vast expanse. The interior is surrounded by wide and spacious galleries, twenty-three feet high, which are reached by twenty elevators having the most approved safety appliances, and by convenient stairways.

The machinery department occupies a space of 1,378 feet long by 300 feet wide, within the main building, and has an extension added in iron 350 feet long and 150 feet wide for heavy machinery, described under the heading of Factories and Mills. From the galleries overlooking more than two miles of shafting can be seen driving every known character of machinery.

Music Hall, with a seating capacity, in commodious chairs, for 11,000 people, a platform capacity for 600 musicians, and a mammoth organ, built to order for the Exposition, occupies the centre of the interior.

The main building will contain general exhibits. It is situated about in the centre of the grounds.

QUESTION DRAWER.

FIELD MICE.

To the Editor of the Canadian Horticulturist.

Dear Sir,—Will tarred felt paper prevent the mice from girdling young fruit trees, or would it injure the trees any? Yours, very truly,

Subscriber.

Toronto, 25th Sept., 1884.

Reply.—We have never tried this paper for the purpose mentioned, but believe it would be effectual and would not injure the trees. If you try it, please report your experience.

WHITE THORN.

Dear Sir,—As I was out rambling through the woods yesterday, I came across a species of thorn entirely new to me. You will find a small branch enclosed. Please inform through *Horticulturist*, and oblige,

Yours, truly, T. A. Chapman.

Echo Heights, Baltimore, Ont.

We submitted the branch to one of our best Canadian botanists, and received the following

Reply.—The spines are longer and more slender, and the leaves slightly deeper cut than usual, but I have no doubt your specimen is a young shoot of *cratægus oxyacantha*. With neither flowers or fruit it is difficult to say with absolute certainty, but still I feel confident that it is as I say, a form of the above. Very truly yours,

T. T. M. Burgess.

London, Ontario.

CORRESPONDENCE.

ANNUAL MEETING
OF THE FRUIT GROWERS' ASSOCIATION OF ONTARIO.

This meeting was held in the town of Barrie, in the County of Simcoe. It was a new departure this holding of our meeting in any other place than that in which the Provincial Exhibition is being held. The founders of the Fruit Growers' Association thought to secure a larger attendance and a wider representation, and thereby to accomplish the greater good, by holding the annual meeting in connection with the Agricultural and Arts Exhibition. Experience, that greatest of teachers, has shown that hitherto the magnitude of the Provincial Exhibition has quite overshadowed everything else; that only one evening could be devoted to the objects of our Association, which barely gave time for the reading of reports, the President's annual address, and the election of officers. No time could be had for eliciting or imparting information, for the discussion of horticultural subjects, in short, for the furtherance of those objects for which the Association exists.

The meeting at Barrie was a great success. Representative men were present from all parts of the Province. A varied collection of fruits and flowers was exhibited, especially from the vicinity of Barrie, giving an opportunity of ascertaining what attention is being given there to the cultivation of these things, and with what measure of success. Two days were spent in very pleasant and profitable discussion of topics connected with horticulture and forestry. A short-hand reporter was present to take down the discussions and preserve the information thus obtained for dissemination through our annual report.

The election of officers was held in the forenoon of the second day, and resulted in the following choice:—

President.—WM. SAUNDERS, F.R.C.S., London.

Vice-President.—P. E. BUCKE, ESQ., Ottawa.

DIRECTORS.

Division	No.	1.—John Croil, Aultsville.
"	"	2.—A. A. Wright, Renfrew.
"	"	3.—D. Nicol, Cataraqui.
"	"	4.—P. C. Dempsey, Trenton.
"	"	5.—Thos. Beall, Lindsay.
"	"	6.—W. E. Wellington, Toronto.
"	"	7.—Jas. Goldie, Guelph.
"	"	8.—A. M. Smith, St. Catharines.
"	"	9.—T. H. Parker, Woodstock.
"	"	10.—A. McD. Allan, Goderich.
"	"	11.—John Little, Fish Creek.
"	"	12.—Hugh Smith, Sarnia.
"	"	13.—Chas. Hickling, Barrie.

AUDITORS. } John Carnegie, Peterboro.
Chas. Drury, Crown Hill.

The newly-elected Board held a meeting immediately after the morning session and appointed D. W. Beadle, St. Catharines, Secretary-Treasurer.

In the evening of the last day the citizens of Barrie entertained the non-resident members at a sumptuous banquet, which gave an opportunity for social intercourse, that was greatly enjoyed. The Barrie Brass Band honored us with a serenade before the banquet was over, so that we left Barrie loaded with honors and carrying with us most grateful recollections of our visit. A NON-RESIDENT.

POULTRY HUMBUG.

TO THE EDITOR OF THE CANADIAN HORTICULTURIST.

I was considerably amazed upon reading the September number of the *Canadian*

Horticulturist to see that an old "grey beard" like you should have been taken in so badly by the communication of W. F., on pages 201-2. This poultry sharp, who enjoys several *aliases*, has been pretty well exposed during the past eighteen months, the *Rural New Yorker* especially being energetic in the good work of exposing the fraud. In western Ontario a great number of the weeklies have from time to time had occasion to call attention to this humbug, and it affords many here amusement that the discrimination of the editor of this magazine has not penetrated the confidential plausibility of J. Bain, *alias* Bave, *alias* W. G., &c.

A friend of mine who was induced to invest his money for the directions to make the incubator, after careful trial of it gives it as his verdict—HUMBUG.

Yours truly,
J. A. MORTON.

Wingham, 27th September, 1884.

THE ACT TO PREVENT THE SPREADING OF NOXIOUS WEEDS.

TO THE EDITOR OF THE CANADIAN HORTICULTURIST.

SIR,—Well, Mr. Editor, what are we going to do about it—this Noxious Weed Act of ours? Is it to be rigorously enforced throughout the length and breadth of the land, or, like some other good, but only permissive, laws which we have on our statute book, is it to be allowed to become only a legal scarecrow or dead letter? As the law stands at present, every municipal council has power, on the petition of fifty or more ratepayers, to appoint an inspector, whose duty it shall be to enforce the Act; but in how many rural municipalities will you find fifty or more ratepayers possessing sufficient public spirit to petition the council to appoint an inspector to inspect themselves, or to have themselves fined five dollars and costs if they neglect to attend to the inspector's instructions? It ought to be the duty of the Government to appoint an inspector for every township, to pay his salary, and to receive all fines imposed for non-compliance with the requirements of the Act; and instead of the inspector summoning the offender before a local magistrate, he should report all such offenders to the County Crown Attorney, whose duty it should be to prosecute the offenders before the County Judge. It is only by the adoption of some such severe measure as this that we can ever hope to contend successfully against those noxious weeds which threaten to annex the province within a few years. As regards these troublesome pests, I can do no better than to quote some extracts from "Colin Clout's Diary," by Geo. A. Allen.

I have had the extracts copied by one of my grand-daughters, who has been here on a visit for some months. She has a habit in writing of placing the words very far apart, but I do not suppose your compositors or proofreaders will find fault with her on that account.

APPLES AND PEARS.

I have never had such a wretched show of small size apples and pears as I have had this year. A kind of blight seems to have passed over the apple trees. The blossoms set well at first, but many of the fruit spores, with their leaves and blossoms, withered away, and in some cases when the apple had become a fine size they dropped off, bringing the spores with them.

PLUMS.

My plums are pretty on the whole, though small; however, I have only lost one plum tree, a

Lombard, grafted some years ago on a wild stock. Some of my neighbors have lost most of their plum trees. The summer rains were local, so that in some places the fruit, both apples and pears, was of a large size.

CRACKING AND SPOTTING.

Some years ago a St. Lawrence apple tree (dwarf) had almost every apple cracked; this year, on the same tree, not one. Two years ago, the only snow-apple tree I have (dwarf) was loaded with fruit, but nearly every apple badly spotted. Last year it bore very few, but they were good. This year the same tree is bearing moderately, and scarcely a spot on any of them. The Yellow Bellflowers seem rather more inclined to spot this year, though they usually do not. A kind of blight seems to have passed over the apple trees this year; the leaves assumed, when seen from a little distance, a kind of greyish tint, and the leaves are curling badly, especially near the ends of the branches, and the leaves begin to fall off unusually early.

SMALL FRUITS.

Of small fruits I have very few; some red and black currants and gooseberries; these last were stripped of their leaves by the caterpillars, but the wild raspberries were very abundant. I had one of the Russian mulberries last year; it did not come on very well; perhaps the soil was too heavy for it. It was cut down in the winter, but is coming on again this year. I had some more last spring and planted them in a drier, better drained place, one failed; the other is growing very well. They are said to stand the winter without protection; in Montana with protection. Either the soil must be too stiff a clay loam, or the climate too damp for them. I sent one to a friend in Cornwall, England, and he tells me it is growing very well. Some years ago I sent him some cuttings of the Concord grape. They grew well, but as yet show no signs of producing fruit.

GRAPES.

My grapes failed altogether to ripen last year. This year the cool weather in July, which was so favorable to the filling of the grain, was unfavorable to the grapes. The warm weather in August brought them on a little; I was in hopes they would ripen, but the cool, unsettled weather we have had since renders that very unlikely. The unusually dry season was very unfavorable for fall ploughing, but recent rains have improved the prospect in that respect. As for our leading industrial and agricultural exhibitions, they are getting to be very little better than so many circuses. The worst point about them is not merely the horse racing, though that is bad enough, but offering prizes to induce fast ladies to exhibit themselves in the capacity of riding and driving jockies—*equestriennes* is the fashionable term—and the county exhibitions are following suit.

I remain, sincerely yours,

CHARLES JULYAN.

Presque Isle P.O., Sarawak, Co. Grey.

AN AMATEUR'S EXPERIENCE.

TO THE EDITOR OF THE CANADIAN HORTICULTURIST.

DEAR SIR,—You often request your subscribers to express their views and give their experience of horticultural matters in your valuable publication, and although I am only an amateur gardener, I thought the results of my attempts might not be uninteresting.

My residence is in Deer Park, a northern suburb of Toronto, and the soil sandy, I may say

very sandy, so much so that I have failed in cultivating the strawberry, because in hot weather the roots are burnt.

Raspberries grow well, and the only fault I have to find is with the shoots, which are as bad as weeds. The crop this year was very abundant and fine, and the canes for next year are strong and ripe. I adopt the system of nipping the top when the cane is about two feet high. Three shoots are thrown out from the top, and when these are about six inches long I nip again, and each of these throw out shoots which are again nipped, and so on. Thus a bushy plant is formed, which I think more easily resists the cold and is not so liable to draggle on the ground, and I think the productiveness is increased. I have some "Cuthbert's," and have found the canes hardy and productive, and the fruit showy and good. On the 18th August, I gathered large ripe berries on this year's growth of wood. I have the "Caroline;" it is hardy and productive, but the fruit is poor. In my opinion all the cap varieties are dry eating. I have the "Hopkin's" black cap. It is an exceedingly hardy and rank grower and productive—large berries, and as good, so far as I can judge, as the "Gregg," which would not grow with me. I have the "Taylor Prolific" blackberry. Every winter it killed to the ground until last winter, when it was untouched. It was loaded with fruit, but the dry weather in August destroyed them. I picked the first on 10th August. I treat the blackberry and black cap the same way as the raspberry.

Gooseberries were a very poor crop. I do not know the cause, unless the late May frost. I have "Downing" and "Smith's Improved;" both mildew very much.

Black currants do not do very well, the berries drop off. Red currants not productive.

GRAPES.—I have about ninety vines, about one-third Delaware. The rest are Rogers' 3, 9 and 44, Jessica, Purity, Lady, Pocklington, Elvira, Martha, Moore's Early, Brant, Creveling, Alvey, Burnet, Worden, Brighton, Iona and Vergennes; also the Prentiss. I always prune about the first week in November. During the summer I go over the vines once a week and prune the laterals with my fingers. The trellises are ten feet apart and eight feet high, cedar posts, four by four. Three longitudinal slats, two by one and a half inches. The first one foot from the ground, the second five feet, and the third at the top. Between the first and second, and the second and third, are two strings of galvanized iron wire.

The vines are ten feet apart. The first vine is carried to the first slat (one foot from the ground), and then an arm is carried in opposite directions along this slat, each being ten feet. The second vine is carried up five feet to the second slat, and then an arm is carried in opposite directions, each ten feet along this slat. The next or third vine is carried along in a similar way as the first, and so on down the trellis. During the first year from about every other eye a cane is allowed to grow upright; in the autumn this is cut back to two eyes. Next year both of these eyes or buds are allowed to throw up a cane, the upper one alone bears fruit, the lower one is to bear fruit the next year. When pruning in the autumn, the cane which has borne fruit is entirely cut away, and the other cane cut back to two eyes.

I suppose all amateurs have to learn from experience. Whether nurserymen are a very sanguine class, or are as blind as a doting mother over the faults of her only child, it is difficult to say, but their enthusiastic descriptions are so very tempting that the reader or listener becomes, like Agrippa, "almost persuaded," and very often like Paul wanted Agrippa to be.

Moore's Early was to be everything that was to be desired in a grape—large, early, good, &c., &c. I have had one for over four years. This year it fruited for the first time and had the magnificent crop of a small bunch and a half. The wood is not much thicker than a pipe stem. On the whole I find it a poor grower, unproductive, and not at all extra early, and I intend to root it up.

The Lady is also a poor grower and unproductive. The berry is a fair one to look upon, but the grape has a decided disagreeable taste, difficult to describe. I shall root it up too.

Pocklington.—This, with me, has also been a poor grower, the wood thin and straggling. I

have had a two year old vine for four years, and have about a half dozen bunches. It is no better, if so good, as the Concord, and is too late for this part of the country, not being ripe on 5th October.

The Martha is too poor a grape to encourage, when much better white ones are to be had.

Jessica is a good grape in every way, and I can safely advise every one who has a few vines, and wants a white grape, to put this in in preference to the other white ones above mentioned. It is a good grower, ripens the wood well. The leaves are strong and healthy. It is productive and early, and the fruit is good. Last year it was the only one which ripened with me. This year the berries began to soften on the 17th August, whilst the Pocklington was hard on the 5th September. The Jessica was ripe about the 18th September, and we have been picking them up to the present time, but I notice that they are better when picked shortly after they are ripe.

The Purity.—This is a white grape sent out by Mr. Campbell, of Delaware, Ohio. I put in a one-year old vine three years ago this autumn, and it has this year borne a few bunches, and has made long strong wood. The bunches are small, the berry about the size of the Delaware, and of a clear amber color, and in this respect has a better appearance than the Jessica. The flavor is fine and delicate. The wood and leaves are healthy and free from mildew, and I think the fruit ripens nearly as early as the Jessica. So far I am in favor of this grape.

The Elvira is another white grape. Is a hardy, rank grower, and very productive. It ripens late, but is now ripe with me. The bunches and berry are small, and the latter have to be thinned as the berries grow so close together. The fruit is of a meaty consistency, and not very good eating, but I should judge will make a very good wine. I would recommend it to any one wanting to cover a shed or fence.

Burnet.—This is a very disappointing grape, and from my own experience is not worth growing. It is very subject to mildew; the berries ripen irregularly, black, red and green upon the same bunch, and some large and others not larger than black currants. It is also late, not being thoroughly ripe yet. It is a good eating grape when you can succeed in getting a decent bunch.

Rogers' 44 is a very handsome black grape, and every person who has room should have one. It is productive, and with me hardy, and with the exception of the "Cottage," the largest out-door grape I have seen. It is later than the Delaware, but still it was ripe this year at the beginning of October. It is not much subject to mildew.

Brant is a black seedling of the late Mr. Arnold. It is a very handsome grape, and the foliage is also handsome. The flavor, however, has too much of the fox or wild grape to suit the taste; I would not recommend it.

Creveling is a good-eating, black grape, and very early, as early with me as the "Jessica." Its great faults are that it is a shy bearer and the bunches very straggling. I had some this year with six, ten and twelve berries on. I would not recommend it to those who only cultivate a few vines; I understand it makes a good wine.

Alvey is a small black grape, rather late, but usually ripens here; is only suitable for wine; it is now ripe.

Delaware, in my opinion, is about as good a grape as can be grown. It has its faults, but on the whole I have not seen any to excel, and but few to equal it. I have an impression, however, that as the vine grows older the bunches become smaller and the vine less productive. I may be mistaken in this. However, this year mine have been very fine. I took the first prize at the Industrial, and the three bunches weighed 1½ lbs. I also took the first prize at Hamilton; the bunches weighed 1 lb. 6 oz. A great number of the bunches were shouldered and the berries were of an unusual size.

Rogers' 9 is a fine grape, with what I call an aromatic flavor. Mine, this year, have bad very straggling bunches. There were grapes exhibited at the Industrial Exhibition under this number which were not the same as mine. They were of a dark red color, whilst the books say, and my

experience also, that this grape is of a bright or brick-red. I have found it hardy and free from mildew, but it wants plenty of room.

Brighton.—This is an excellent grape, slightly inclined to mildew. It ripens fairly early. The bunches are not as large as some of Rogers', but the berries are a good size and excellent flavor. Every one should at least have one vine of this variety.

Rogers' 3.—I have not had much experience with this grape. Mine has borne a few bunches this year and I like them very much. The vine is hardy and fairly early.

Iona is an excellent flavored grape, but is too late to be depended upon in this part of the Province. I have ripened them and a better grape is not to be desired.

I would recommend to the amateur the following:—White, Jessica and Purity; Red, Delaware, Brighton and Rogers' 3 and 9. (The Salem and Agawam are too subject to mildew). Black, Rogers' 44. (Rogers' 4 and 19 I have found to be very good.) I attribute my success this year to the fact that last fall I laid the vines down and covered them. I did so for this reason: I came to the conclusion, from the unusually cold summer, that the wood and buds did not ripen, and if left exposed they would be killed by the frost. This was the experience of some of my neighbors. I intend to do the same this fall, for I do not think the wood or buds will be ripe enough to stand the winter. I notice at this date a good deal of the wood of a greenish hue.

I have a few peach trees. In the spring there was a fair show of bloom, but the May frost destroyed the fruit. However, on the Early Canada I had four fine peaches which were thoroughly ripe on the 20th of August.

Cherries had a fair show of blossom, but no fruit, which I attribute to the frost.

Plums did not prosper either. I tried Paris-green, but probably was too late in putting it on. A neighbor told me that he had destroyed the leaves on his by, as he supposes, using too strong a dose of Paris-green.

I have had some little experience in the vegetable line. I heard so much of Bliss' American Wonder Pea that I thought I would try it this year. I sowed some and Carter's Little Gem at the same time, and I prefer the latter to the former. I sowed on April 11th and gathered on the 25th June. I found Carter's more prolific and just as good eating. I, as a rule, sow the Gem and Blue Petercorn, which has not been a success this year. I always put in the Tom Thumb (dwarf kind) for an early crop, and have found it very satisfactory. Stowell's evergreen corn has been a poor crop; several of the cobs had no corn at all on them and a great number only half covered. I suppose the seed must have been poor.

Turnips do not succeed with me; they are hard and stringy, possibly from being a sandy soil. Beets do well. I put in Extra Early Egyptian Blood Turnip and find them very sweet and tender, and for the winter crop "Half Long Dark Blood."

Carrots also do well. I find the "Early Scarlet Horn" and "Half long Scarlet Nantes" to answer for the summer and winter.

Cabbage do fairly well. Cauliflower I did very well last year, but this year have been a failure. The caterpillar, of course, attacks them, but I manage to get all I want.

Tomatoes.—I have this year the "Paragon" and "Livingstone's Perfection." Both are very fine and well-flavored. I have, however, found many to rot, but the production is so large that the decayed ones are not missed. I have the "Mayflower;" it is a very good tomato. I put the plants in on the 12th June, and gathered fruit on 13th August, earlier than from the others, but the flavor, in my opinion, is not so good as that of the "Paragon" or "Perfection."

I planted celery the new way, *i.e.*, not in trenches, and have found it to answer very well notwithstanding there was so much dry weather in August.

Lastly, I bind the *Canadian Horticulturist* when I have three volumes; that is, I bind three volumes in one, and find them make a handy book and easier of reference.

Hoping I have not tried yours and the readers' patience,

Believe me, faithfully yours,

ALFRED HOSKIN.

SHIPPING APPLES TO ENGLAND.

REPLY TO MRS. GWYN.

TO THE EDITOR CANADIAN HORTICULTURIST.

DEAR SIR,—The enquiry of Mrs. H. C. Gwyn of Dundas, on page 222, October number, requires more than an ordinary reply, as it touches upon a subject of much importance to Ontario apple growers. After an experience of several years in dealing with the markets of the chief cities of Britain, I advise growers to sell as best they can to purchasers at home who are exporting, or dispose of the crop in the nearest market for home consumption. If, however, a grower has, say a thousand or more barrels of very choice, it will pay any year to ship to Liverpool and accompany the cargo, disposing of them in that city in bulk or shipping to London or Glasgow. In this case it is necessary to place them in a storehouse and open the top of a number of barrels of each kind for inspection.

To ship to a commission firm just means this: That, upon arrival in Liverpool or Glasgow, the fruit is transferred to a large storeroom, opened and examined, an auctioneer is called in who sells them by the hundred or more barrels to the highest bidder who happens to be quick enough to get in a bid, for these auctioneers do not dwell a moment to get a higher purchaser, and hence the result may be either loss or gain to the shipper. Or the commission firm *may* dispose of them by private sale, in lots, if they are not pressed for storeroom for incoming cargoes, in which case the results are likely to average better. It is better, therefore, for the grower to take the best obtainable price at home unless he can go with the cargo. Those who wish to test this matter should be careful of the following points: Have all the apples hand-picked and laid upon the ground under the trees for a week or ten days to *sweat* and toughen the skin. Then sort over these, taking out any spotted or wormy specimens that may have escaped the eyes of the pickers, and proceed to pack by placing the first layer with stems down and the next with blossom-end down, after which they can be put in with baskets, shaking the barrel after every two baskets until it is filled sufficiently to pack and press solid. This has to be judged of according to the variety, as some will press down more than others in order to carry solid. In packing it will pay to have apples sorted according to size and color, and the barrel branded accordingly. When the barrel is pressed and closed securely turn it end for end and brand it, so that when opened the fruit will be seen to advantage with stems up. And *be sure and have them named correctly*. If you have a hundred barrels of King of Tompkins County named Cayuga Red Streak, as I have seen often, you will only get the price of the latter variety or the cull price, whereas, if they are correctly named, you get the price of that variety according to your sample. It will not pay to send inferior fruit *in quality* to Britain now even although high-colored, as Britishers are beginning to know a little something about quality in an apple! As a rule they prefer high-colored fruit, but that, so far as it is or has been a prejudice, will soon give place entirely to intrinsic value in quality, and hence the R. I. Greening, which has been down low in that market, is coming to the front. Give me a cargo of choice apples, leading varieties, such as Russets, Baldwins, Spies, King Tompkins County, R. I. Greening, Ribston Pippin, Blenheim Pippin, Wagner, Ontario, Mann, &c., all well selected and packed, and I care not how the British market may be flooded with apples from other countries lean sell at a paying figure, and am sure of a higher price than any other country can demand, because our apples, especially from the central and northern belt of Ontario, *are*

superior in point of QUALITY *to any in the world*, and British as well as other consumers are becoming aware of this. To growers I say choose best leading varieties and plant more trees. Plant, plant, plant!

Goderich, Oct. 20th, 1884.

HYDRANGEA PANICULATA GRANDIFLORA.

DEAR SIR,—At your request, I beg to state that the *Hydrangea paniculata* has flowered annually, but not to the extent expected. Our elevated tableland in the county of Perth is, perhaps, not adapted to the *grandiflora* of more favored localities; or the plant may have been neglected in some particular.

The other plants, grape vines, trees, &c., have all done well, and are all generally thriving.

Yours truly, JNO. BUCHAN.

Stratford, Oct. 14th, 1884.

HYDRANGEA PANICULATA GRANDIFLORA.

DEAR EDITOR,—In the last number of the *Horticulturist* I notice Professor Budd, of the Iowa Agricultural College, making some very strong remarks about the *Hydrangea paniculata grandiflora*. About the beauty of this plant, or rather an autumn shrub, I can safely say that I have one that has stood the cold of the last three winters, and I never saw anything more beautiful than it was these last few days. I must say it was more than beautiful. I could safely say it is the handsomest shrub I ever saw at this season of the year.

Wishing you every success with your *Canadian Horticulturist*, I remain,

Yours, most respectfully,

WM. CAMPBELL.

Barrie, Oct. 11th, 1884.

DE OMNIBUS REBUS.

TO THE EDITOR.

DEAR SIR,—As want of time prevented our getting through the programme at our meeting, I dare say you will give us space to work it out.

Peas for table use, the best varieties; Can they be profitably grown for Market?—At the last meeting of the Massachusetts Horticultural Society, held in Boston June last, and where the exhibits are said to have been, in number and excellence, never equalled on the continent, the report says, “All the premiums for peas, regardless of variety, were awarded for American Wonder.” I think your readers will set it down as their standard till they find better. I have found it so much superior to any other kinds I have tried that I refrain from mentioning other early peas.

It is a perfect dwarf, on vines about 10 inches high, bearing long, well-filled pods; quality excellent.

Bliss' Abundance Pea.—Last spring I sowed two pints of this variety, which, as most of your readers know was also raised by the late Mr. Charles Arnold of Paris, and for which he realized the nice little sum of $1,000 for his first sale of *less than a bushel*. This is said to be the most prolific variety known; half dwarf vines about 18 to 20 inches long; pods 3 to 3½ inches long; second early. Speaking of its great productiveness, Messrs. Bliss say that from one of their growers they received 667 lbs. of peas from 10 lbs. of the seed furnished. I had hoped to go and do likewise, but, Mr. Editor, you are aware that the blackbirds in these parts are passionately fond of peas, and after they had devoured my half-acre of American Wonder peas they attacked the Abundance. I thought they had done the same with these, but on returning from my seaside trip I found a bunch of them in the summer-house. I didn't expect to find any peas in it, but they were threshed out and we got 20 lbs. of peas. About half the seed was sown in the field, these in the garden; the former was entirely devoured, so these 20 lbs. were the product of about one pint after the birds had their share, probably three-fourths. I never tasted them.

The Hon. Marshall P. Wilder says of the pea: "It is very productive and a splendid acquisition, of most excellent habit, early, with very full pods, sweet and luscious."

As it branches out, as Bliss says, to a veritable bush, the peas have to be planted 6 to 8 inches apart. Although, it is said, it will when well hoed do without brushing, it is better with it. This, and the difficulty of planting 8 in. apart, is an objection. Perhaps it might be profitable as a field pea sowed broadcast.

As to the profitableness of growing peas green for market I have no experience, but think there can be no money in it. Last year I sold 12 bush. American Wonder for seed for $60, off about one-half acre in drills.

Tomatoes.—I can highly recommend the Mayflower. Very early, large, perfectly smooth, beautiful bright red, rich flavor, and very productive. I distributed a few packages of the seed at our meeting to our Directors. Although the Editor says I am an austere man, they need be afraid of neither me nor them, but go hide them in the earth and let us have their report when the time comes.

Currants.—When the March number of the *Horticulturist*, which contained a picture of Fay's Prolific Red Currant, reached England, I was asked if such were the currants we grew in Canada. Of course I answered in the affirmative. They look well on paper; I have not yet fruited them. I bought one small bush in 1882. Last spring I divided all the new wood of three small bushes into cuttings, three eyes in each, planted them in pots in the hot-bed, and thirty out of thirty-one lived and are now fine thrifty plants.

Beets.—The Egyptian beet, I think, yet stands first on the list for earliness. I tried this year Burpee's Imperial Blood Turnip, and can recommend it as an excellent summer beet. The cook complains of it being too large for the pot. At one of our meetings a member, as a cure for this, recommended sowing later, and at intervals, I have tried it with good results.

Grapes.—The first time for several years our stock, consisting of Champion (if it is a grape), Concord, Hartford, Delaware, Salem, Massasoit, Agawam, Brighton, Wilder and Moore's Early have all ripened. The three first-named have never failed to ripen. Although the others ripened this year we still hope to have some kinds we can depend on ripening in our cold north about the middle of September.

The Spot on the Apple Tree.—Whether or not the committee appointed to experiment on the application of various substances likely to act as a preventative to the disease made their report, I am unable to say; if they did it must have been when I was absent.

I am sorry to say my appliances were very unsuccessful. I tried dry unleached ashes thrown over the trees when the dew was on, unslacked lime in the same way, sulphur stirred in water and

syringed, and sulphate of soda in the same way, but I could see no difference on trees so treated from the adjoining ones. My neighbors say their orchards are freer from the spot than usual, while some of them say they are entirely so. I see little improvement in mine; in an orchard of 500 trees I think I have about 1,000 bushels of Fameuse nearly worthless. Trees that have all along been cultivated round show more of the spot than older ones that have for some time been in grass. The Fameuse and McIntosh suffer the most.

If your readers have followed me so far I commend their patience.

Yours truly, JOHN CROIL.

P. S.—Since writing the above, I find in the October number of the *Horticulturist* answers solicited, with experiences of the *Hydrangea paniculata*, and its hardiness. And may say that in our cold north, where 25° below zero is nothing uncommon, it has stood the winter unhurt without any protection. We endorse Professor Budd's opinion of it as a grand shrub—a plant of it well worth a year's subscription to the *Horticulturist*.—J. C.

ANNUAL EXHIBITION OF THE ABBOTSFORD FRUIT GROWERS' ASSOCIATION.

This society held its 8th annual exhibition on the 25th ult., at Rougemont, at the special desire of the Rouville County Agricultural Society. It was held in a large open shed built for the purpose, and near the Agricultural Society's show grounds. Such a shed is the best possible building for such an exhibition, and the special thanks of the society are due to Messrs. James Code and Richard Standish, of Rougemont, for their hard work and plucky perseverance in this matter. Of apples, there were upon the tables 469 plates including 53 plates of crab apples. In the contest for best collection, it was expected that the tug of war would be between the best Abbotsford collection and that of Mr. Whitfield of Rougemont. Yet the three prizes were taken by Abbotsford men. Mr. Whitfield had plates of Ribston Pippin and Northern Spy which were wonderfully fine. He had the Baldwin, Rhode Island Greening, and King of Tompkins County, tender varieties which cannot be grown upon the exposed slope of Yamaska Mountain. Abbotsford orchardists have been planting a great many new varieties, yet we cannot help feeling that had Mr. Whitfield's orchard been gathered, labelled as carefully as the Abbotsford men do theirs, it would have stood a fair chance of being first.

Of the 469 plates exhibited, about 340 were from Abbotsford, 128 from Rougemont, of which 55 were from Mr. Whitfield and 1 from St. Hilaire. In the single plate competition, however, Rougemont did well and the one plate from St. Hilaire took first prize for "best plate of Fameuse."

The display of out-door grapes was exceedingly fine—165 plates were shown. Mr. Wm. Mead Pattison, of Clarenceville, appeared with a collection of 65 varieties including most of the new varieties most worthy of trial.

Mr. Pattison has undertaken a work of great public usefulness, and is pushing it with an amount of perseverance that must bring good results. His collection was unanimously awarded the first prize, and he was then harnessed in as a judge on the remaining sections of grapes.

The next largest collection was an Abbotsford one of 34 varieties. In the prize for best five varieties, the best two collections were nearly a tie; as the judges examined them, their merits seemed to balance in the scales. The first prize was finally adjudged to Mr. Gibb, while in the opinion of Mr. Gibb, Mr. N. C. Fisk should have had it, owing to the very remarkable size of his

Lindleys.

In vegetables there were many good samples, but in general variety far below the collection at the Knowlton, Dunham and Granby horticultural exhibitions. In “best collection” Mr. Whitfield’s gardener, Mr. Hughes, was head and shoulders above other collections.

In flowers, in many of the sections, such as collections of plants in pots, Abbotsford would not compete, owing to the distance and it was hoped that they would have been filled by competitors from Rougemont. Rougemont, however, we regret to say, did not contribute *one single flower*; neither did it compete on canned fruit, a section which Abbotsford could hardly carry so long a distance.

RASPBERRIES.

N.Y. AGRICULTURAL EXPERIMENT STATION.

The Station Horticulturist, Mr. E. S. Goff, has taken great interest in the raspberry, and the following results of our trials will be read with interest:—

In the year 1882, two plants each of thirty-two varieties of Raspberry were planted out in the Station garden. The plants were set out in rows, six feet apart, and three feet apart in the row. No winter protection has been given. The soil has been cultivated sufficiently to keep down weeds, and the canes were tied to stakes as they became sufficiently tall to require support.

All of these plants have survived thus far, except five, viz.: two Brinkles’ Orange, which were winter-killed the first winter after setting, two American Blackcap and one Prosser. The remainder of the plants have borne their first full crop the present season. We have kept a careful record of the date at which each variety commenced to ripen its fruit, the number of days that each continued in bearing, and the total yield of each, taking notes, also, as to the comparative size and quality of the fruit in the different varieties. For the information of those interested we present an abstract of our results. The total yield is given in ounces and decimals of an ounce; and the comparative size of the berries of the different varieties is shown by the weight of twenty-five samples, given in grains:—

	First Ripe Fruits.	Total yield in ounces.	No. of days in bearing.	Weight of 25 lbs. berries in grains.
1. Brandywine	July 5	7.295	33	478
2. Caroline	“ 8	44.374	30	524
3. Clarke	“ 5	65.386	30	655
4. Cuthbert	“ 8	22.868	30	601
5. Davison’s Thornless	“ 1	14.233	22	300
6. Delaware	“ 5	44.529	33	447
7. Early Prolific	“ 3	80.326	35	655
8. Fastolff	“ 5	19.845	26	540
9. Fontenay	“ 5	31.527	33	833
10. Franconia	“ 12	15.185	26	640
11. Gregg	“ 14	17.009	21	439
12. Herstein	“ 5	17.239	26	620
13. Henrietta	“ 5	19.654	26	617
14. Highland Hardy	“ 2	12.427	28	408
15. Knevitt	“ 5	19.820	33	798
16. Mammoth Cluster	“ 10	26.392	25	331
17. Mrs. Wood	“ 3	36.035	35	733
18. Naomi	“ 3	1.323	28	234

19. Parnell	"	5	26.607	30	540
20. Philadelphia	"	8	6.420	23	227
21. *Prosser	"	5	15.083	26	308
22. Pallnan	"	5	6.952	26	308
23. Red Antwerp	"	3	18.556	35	555
24. Reliance	"	5	17.242	26	432
25. Seneca	"	10	29.030	25	347
26. Thwack	"	3	29.085	35	710
27. Turner	"	3	19.171	28	432
28. Vice-Pres. French	"	5	35.865	30	586
29. Victoria	"	5	37.090	33	463
30. Yellow Antwerp	"	10	20.529	28	470

* The yield of this variety is calculated from one plant.

The following notes were made as to quality:—

2. Delicate and pleasant, but not rich; moderately firm.
3. Rather sweet and delicate, but not rich; moderately firm.
4. Very sweet and rich; firm.
5. Sweet and rich; rather firm.
6. Rather soft; very sweet and delicate, resembling that of the wild red raspberry.
7. Flavor a well-marked, rather harsh acid; moderately firm.
8. Moderately rich, sweet; not very firm.
9. Extremely rich and sweet; moderately firm.
10. Rich and sprightly; moderately firm.
11. Flavor rather inferior, firm.
12. Sweet and delicate; moderately firm.
13. Insipid, with little raspberry flavor; moderately firm.
14. Very sweet and delicate; rather soft.
15. Moderately rich and sweet; moderately firm.
16. Insipid; firm.
17. Very rich, sweet and delicate; rather soft.
18. Very sweet, but lacking raspberry flavor; rather soft.
19. Lacks sweetness, richness and raspberry flavor; moderately firm.
20. Rather insipid; moderately firm.
21. Very sweet and delicate; moderately firm.
22. Sweet, but leaves an acid taste in the mouth; moderately firm.
23. Moderately rich and sweet; rather soft.
24. Flavor insipid; moderately firm.
25. Rather insipid; firm.
26. Sweet and rich; quite firm.
27. Very sweet and delicate; moderately firm.
28. Extremely rich and sweet; moderately firm.
29. Extremely rich and sweet; moderately firm.
30. Delicate, but not high-flavored; very soft.

It will be observed that our list is not confined to the newer varieties, but includes many of the older sorts as well.

The old Early Prolific proved by far the most productive. This variety, now little grown, possesses the valuable qualities of great prolificacy and hardiness, with entire freedom from thorns; and though the harsh acid flavor of its fruit makes the latter undesirable, it would seem that its good qualities might render it valuable as a parent for new varieties.

The Clarke proved second in productiveness, the Delaware third, and the Caroline fourth; the Philadelphia, Brandywine and Naomi, were least productive. Davison's Thornless was earliest to

ripen, while Gregg was latest. Early Prolific, Mrs. Wood and Red Antwerp continued longest in bearing, while Gregg yielded its crop in the shortest time.

It appears that the berries of Knevett, (Knevett's Giant) were largest, those of Mrs. Wood were second in size, while those of Naomi and Davison's Thornless were smallest. In flavor, the Delaware seemed to surpass all others in the characteristic aroma of the wild red raspberry, and Fontenay, Vice-President French and Victoria were superior in richness and sweetness.

E. LEWIS STURTEVANT, *Director*.

SOME HARDY SHRUBS NOT WELL KNOWN.

BY PROF. J. L. BUDD, IOWA AGR. COLLEGE.

Hydrangea læviegata: Growth smaller than *H. paniculata grandiflora*, with foliage more like that of our greenhouse species. Flowers in June and July in large rounded cymes of small crowned white flowers. It seems quite as hardy as *paniculata*, and is propagated in the same way.

Hypericum Kalmianum: A low spreading shrub with neat foliage, and the greatest profusion of gay yellow flowers, during August and September, or until frost. We have a section, in low hedge form, which is much admired during the fall months.

Hypericum hircinum: A much branched low shrub with pretty foliage, and a profusion of quite large yellow flowers during July and August. Much prized in Europe.

Hypericum salicifolium: A Russian species with light colored, willow-like foliage, and a great show of bright yellow flowers during July and August.

Hypericum elatum: An erect growing, much branched species, with peculiar yellow flowers, with yellow styles longer than the stamens.

Hypericum androsæmum: Of oriental origin, known in Europe as "Sweet Amber." Its foliage has peculiar glandular dots. Flowers from July to September in terminal clustered cymes of bright yellow flowers.

All of the shrubby St. John's-worts are propagated by base cuttings starting from the crown.

Cornus stricta, variegatus: This seems to do better with us than the C. variegatus of the Eastern nurseries, and its foliage is brighter and its leaf contrasts of pure white and varied shades of green are more striking.

Cornus alba Sibirica: A pretty shrub with bright red shoots, fine plicated foliage, and a profuse show of white flowers in June. Propagated by ripe wood cuttings.

Prunus padus aucubæfolia: In the notes on the ornamental varieties of the Prunus this was overlooked. In our climate it is by far the finest thing we have in the way of shrubs with ornamental foliage. Visitors note it from afar and have only words of praise. The form from Central Russia has larger, thicker and more perfectly mottled foliage than the one common in Eastern nurseries.

Cytisus capitatus: The northern forms of what in England is known as the "Broom" are perfectly at home with us. The "headed flowered Cytisus" is a peculiar hairy species with yellow flowers in July in dense terminal heads. The foliage is in triplets, and looks much like that of the red clover, very pretty on small lawns, not often growing over two feet in height.

Cytisus purpurea: Also a small shrub with 3-foliate leaves. Flowers in pairs; varied in color from rosy purple to white in the varieties. Propagated by base cuttings.

Potentilla fruticosa humulus: A very low grower with five-foliate clover-like leaves, and bright yellow flowers in July, very pretty for low borders. *Potentilla fruticosa* is much the same, but more erect in habit.

Potentilla Salesovii: From Siberia. Pinnately cut leaves, thick and leathery. Flowers yellow, numerous, and pretty. A very desirable low-growing shrub that will attract much attention.

Euonymus nanus: A very low form of the "Burning bush" from the Altai Mountains in Siberia. The foliage, flowers, and scarlet fruits are pretty, and it should have a place in border planting.

Daphne Altaica: The shrubby Daphnes grown in the milder climate of the Eastern States, are tender with us, but fortunately the finest of the family I have seen is from the foothills of the Altai mountains in Siberia, and is perfectly hardy with us. The foliage is thick, glabrous, silvery, and in all respects pleasing. The flowers are in terminal umbels in fives, are pure white, and decidedly more showy than any of the genus grown in the open air. Propagated by ripe wood cuttings.

Ligustrum vulgare: The English, French, and West German forms of the "Privet" have not thriven in our prairie soil and climate. As introduced from Poland and Siberia it seems perfectly hardy and the foliage endures our summer heat and aridity with unimpaired beauty. For ornamental hedges, and for hiding undesirable views or objects it is unequaled, as its foliage so nearly approaches the myrtle. It produces great crops of dark purple berries which hang well into the winter unless taken by the birds. Grows readily from the seed or cuttings.—*Prairie Farmer.*

THISTLES.

(*From Colin Clout's Diary*).

Nature, indeed, has been very prodigal to thistles; she has given them every advantage and no enemies on earth, except farmers and donkeys. Just look at such a head as this that I have cut off clean with a switch of my stick, and then consider what fraction of a chance the wheat or the wheat-growers have got against it. Each stalk supports some dozen heads of blossom at least, and each head contains a hundred separate flowers, every one of them destined to produce in due time a winged and tufted seed. The thistles are members of the great composite family, like daisies and the dandelions, and they have their little bells clustered together after the common composite fashion into close and compact flower-heads. If you cut the head through with your knife, longitudinally—it is difficult to tear it open because of the prickly tips of the bracts—you will see that it is made up of innumerable distinct purple florets, each with five petals united into a long deep tube, and each with a little seed-like fruit at the bottom, crowned by a ring of hairs (the future thistle down), which are in fact the altered and modified relics of original calyx. Even in its simplest form, the composite flower bears the marks of being an extremely developed floral type; and the thistle, though relatively simple, is very far from being the simplest among the composite plants. A glance at the past history of the race will show why it now proves so persistent and noxious an enemy to us agriculturists. It is one of the most highly evolved and successful of living plants; and it pits itself against the relatively simple and sickly wheat, an artificial plant with a feeble constitution, which we ourselves have sedulously created for our own special use. The natural consequence is that if we did not give every advantage to the wheat and put every obstacle we can in the way of the thistles, they would live it down in a single decade; as European weeds are living down the native weeds of New Zealand, or as English vermin are living down the aboriginal marsupials of isolated Australia. The primitive ancestral composite, to go no further back in its history than that, was already a very advanced sort of plant, with a number of little tubular blossoms, like miniature Canterbury bells, crowded together compactly into clustered many-flowered heads. The petals were probably purple, and its calyx

had even then assumed the form of long floating hairs to the ripe seed. But at an early stage of their life as composites, the group broke up into three minor tribes, from which are severally descended the daisies, the dandelions and the thistles; for under one or other of those general heads the many thousand known species may be roughly classified. The daisy tribe, as we all know, took to producing mostly yellow florets, with white or pink outer rays, to allure their special insect allies. The dandelion tribe turned all its florets throughout the entire head into long rays, like the external row of the daisies, and colored them uniformly yellow throughout, on behalf of the little yellow-loving flies by whom its seeds are usually fertilized. But the thistles, the central tribe of all, retained more simply the original habits of the race, in that all their florets are still tubular, instead of being split out into strap-shaped rays; while the vast majority of them keep as yet to the primitive purple tinctures of their race, which endear them to the higher insects. Bees are the chief fertilizers of thistle-heads; but butterflies also frequently pay them a visit, and in the home-close at the present moment they are being attended by thousands of little black and red burnet moths, which prefer the long bell-shaped blossoms even to that favorite flower with them, the bird's-foot trefoil. Almost every head in the field is covered by half a dozen moths at once, all drinking nectar from the recesses of the deep long tube, and all unconsciously carrying pollen from stem to stem on their uncoiled proboscis. But even after the thistle tribe had separated from its sister composites of the daisy and dandelion groups, it was far from having reached the fully developed thistly type. The lower members of the tribe have no prickles, and some of them are very simple, unarmed weeds indeed. The common sagwort, which abounds in copses and hangers in the south of England, represents the first rough draft of a thistle in this nascent condition. To look at, it is very thistle-like indeed, especially in its purple flower-heads, closely surrounded by a set of tight but not prickly bracts. Living as it does in bushy places, however, where cattle seldom penetrate, it has not felt the need of protective defences, and so it has not been ousted from its own special haunts by the later and more highly developed true thistles, which are by origin weeds of the open grass-clad lowlands, evolved under stress of damage from herbivorous animals. But where cows and horses abound, or, still earlier, where deer and antelopes are common, the defenceless sagwort would have little chance, and under such circumstances only the harder and stringier plants, or those which show some tendency to produce protective spines and bristles could hope for success in the struggle for existence. Thus there has arisen a natural tendency in the level plains to favor all weeds so protected; and, as a matter of fact, the vast majority of open lowland weeds at the present day do actually possess some protective device of stings, harsh hairs, prickles, or spines, or else are very stringy or very nauseous to the taste. Our object as cultivators is generally to keep down these natively well-endowed races, in favor of the softer grasses and clovers, which we are obliged artificially to fence in and protect with all possible precautions. But even so, in spite of all our endeavors to expel nature with our civilized pitchfork, "*tamen usque recurrit*." The thistle that is overrunning the home-close ranks, indeed, is among the best adapted and most successful of its kind, which is only the converse way of saying that it is a most troublesome and ineradicable weed. Creeping thistle, we call it, from its peculiar habits; for, besides its open mode of propagation by its floating seeds, it has a sneaking trick of spreading underground by its buried root-stock, which sends up fresh stems every year from the joints or nodes. It is the commonest of all its race, not in England only, but throughout the globe; for its winged fruits have been carried to every quarter of the world with seed corn and clovers. Cut it down, and a new head springs from below the wound; hack it close to the ground, and the root-stock pushes out a fresh young shoot from an unsuspected corner; harrow it up bodily, and the seed blows over at harvest time from all the surrounding fields, just at the right moment for the autumn ploughing. For hardiness of constitution it has no equal, and this is partly due no doubt to the fact that universal cross-fertilization has become absolutely certain by the separation of the sexes on different plants. This

globular head that I have just swished off has none but stamen bearing florets; this other more conical cluster, that I am trying to cut with the aid of my knife and handkerchief, contains nothing, on the contrary, but pistils and seeds. Such careful separation of the two elements perfectly ensures a good cross in each generation, and so greatly improves the quality of the strain. Add that every stem produces some thirty or forty heads, each containing more than a hundred florets, with winged seeds that fly about everywhere, and can you wonder that thistles are so plentiful? Even the less developed types, like the melancholy thistle of the Highlands, so called from its gracefully nodding or drooping head, get on well enough, though that particular species differs from all others in not being prickly, and depends for its defence entirely on its stringy nature. Centaury and corn-bluebottle, too, are others of the same tribe, which have differentiated themselves in less unpleasant ways than the true thistles; while the common burdock has turned the prickles on its head into small clinging hooks, which help to disperse the seeds in a somewhat different manner by clinging to the legs of animals; and it is a significant fact that the burdocks are most essentially wayside weeds of the waste places in cultivated lands. But its own particular group—that is to say, among the purple central composites—the creeping thistle in the home-close is certainly the highest existing product of vegetable evolution; and that is what makes me bestow upon it after all, a certain extorted merit of grudging admiration. It lays itself out to be troublesome; it succeeds to perfection.

SARAWAK.

RUSSIAN APPLES.

Dr. Hoskins writes to the *Home Farm* in defence of some of the Russian apples which he has tested at his place in Northeastern Vermont, and gives his opinion of a few of them as follows:

For the earliest fruit, the Yellow Transparent and its close relatives, Grand Sultan and Charlottenthaler are among the very best I know of. They ripen through August. My first, this cool year, were marketed August 2. There are a few on the trees yet, Sept. 6. For such early apples they are long lived, keeping two weeks easily. They are shaped some like Porter, but rounder, and with a lighter yellow, becoming perfectly ivory white if left on the trees until dead ripe. I think no one can distinguish the trees or the fruit of these three varieties, when mixed, with any certainty, at least. All are iron-clad against cold, but Grand Sultan shows distinctness in dying sometimes, when young, of "bark blight," which I have not seen in the other two. It is thought that the Charlottenthaler runs rather the largest in fruit, but I have not had that variety long enough to be sure about it. All these are very productive, full medium in size, and on young trees often large. In quality for dessert, when dead ripe, they are hardly inferior to the Early Harvest, and they are always as smooth and fair as turned ivory.

Next let me name St. Peter's apple, as it is next in season, being now (Sept. 6) full in eating. It is well striped with red, small to medium in size, the tree of rather slender but free growth, and quite healthy. Those who have made up their minds from the Duchess that there are no good eating apples among the Russians will wobble badly on Yellow Transparent, and give it up entirely on St. Peter. "As good as Fameuse," was the verdict, only yesterday, of an orchardist from the central part of the state,—and Fameuse is our standard of excellence for a dessert apple. This tree does not bear as young as the Yellow transparent class, but is a full bearer at eight or ten years from planting, yielding quarter and half crops several years sooner. Nothing I have sells better. It is always fair, indeed it is not necessary to repeat this of Russian apples. I never saw one that spotted or cracked.

PROLIFIC SWEETING is the only large fall sweet, at once productive, handsome, good and iron-clad, that I have yet got hold of. It is a vigorous, upright tree, about with St. Peter in coming to bearing, but very productive after say ten years' planting. The fruit is large, fair, smooth, roundish oblate (flattened), straw-yellow in color when ripe, not so good as some of your best dessert fall sweets of Southern Maine, (the old Franklin Sweet, for instance) but full medium in quality, or "very good," and a quick selling apple bearing transportation well. Season, all of Sept. and into Oct. It is a fine baking apple. Top grafted on Tetofsky, it bears quite young.

The last apple I shall speak of this time is one that I have been very slow in making up my mind about. It has been the longest coming to full bearing of any of my Russians imported in 1870, and has changed and improved a good deal since it first showed fruit, four or five years ago. This is the GOLDEN WHITE. The tree is a most vigorous grower, even in poor soil, with large, thick, dark green leaves, white beneath as a silver poplar's—a very peculiar tree. Its growth is spreading, even before it begins to bear, like the Ribstone Pippin. In fact it is a magnificent grower of the most robust character of any of the Russians, by far, that I have seen, and yet a true Russian. The fruit is as large as the Baldwin, round, but uneven, like a ball of putty, and with very little basin or cavity. Heretofore with me it has not colored much, but this year there is a full crop that is coloring up well, a dull red, specked with gray, on a dull gray-green ground, odd rather than attractive, or rather attractive by oddness. It is a late fall apple, keeping well through November. In quality it is mild, pleasant sub-acid, soft-fleshed but not "squashy," and quite fine grained, not high-flavored, but a good eating apple. It is so good a token that it might be called early winter even here in lat. 45°, and in Northern Aroostook would probably keep longer. It is already becoming popular in Montreal, where, somehow, they got it quite soon after its importation. Mr. R. Brodie of that city exhibited it last year at the Montreal Fair, and spoke strongly in its praise.

AMONG THE SMALL FRUITS.

In such dry seasons as this the benefits of growing strawberries by the hill system are very great and plainly to be seen. My plants, kept free from runners, kept on bearing long after the "matted beds" of other growers had begun to wilt in the foliage and fail in fruit. And yet my land is light and poor, and the variety, the Bidwell, which is supposed to be the readiest to fail in maturing its fruit.

WHAT A NOBLE VARIETY THE BIDWELL IS!

That is, where it succeeds. The berry so large and fine, the quality so good, and the yield so abundant. If it would only ship a little better, and if the "greentip" were not so common, it would be about as near perfection in the strawberry as we can well expect in this world of imperfections. The only patch at all fairly treated, yielded at the rate of 240 bushels to the acre this year, exceeding both Wilson and Crescent close by. Beat it, who can, in such a season and on rather poor soil.

"THERE IS ALWAYS ROOM AT THE TOP."

In the height of the strawberry season, I am informed, well-grown Sharpless brought 25c per quart and upwards in Toronto. I found prime Wilson and Manchester retailing on King street at 15c per box, while a few blocks away on the same thoroughfare, inferior berries were going slow at 10c per three boxes. Grow good fruit or none if you want profit.

SHARPLESS STRAWBERRY

does not bear well on my soil. But my soil is poor, my business (plant growing) not requiring great fertility. This variety wants *rich* soil, and improves remarkably with fertility. I get most remarkable accounts of its productiveness from growers at Barrie. It has the peculiarity of yielding better the second "full-crop" than the first.

DO RASPBERRIES PAY?

They pay me. Two-thirds of an acre yielded me a crop that sold for over $100, without an ounce of manure having been applied for two years, and with only one hoeing this year at a cost of, say $3. Was it weedy? Yes! Now some one tell me to practice what I preach, for I advocate clean culture. But the point is, *the crop was there*. Highland hardy and Turner are not the largest of berries, especially under neglect, yet they averaged about nine cents per quart around town in this season of unusual abundance of wild berries.

SHAFFER'S COLOSSAL

is *the berry* for home use or for canning. How the bushes do yield? I think one year plants bear about as much as full-grown bushes of other sorts. Purchasers object to the color, which is an unattractive maroon, but a little testing and a cent per quart of decrease in price reassures them. The quality is said to be rather "acid," but we find it has the singular merit of tasting better than we expected from report.

BUT THE CUTHBERT

stands easily first among all tested red raspberries. The bush is rather slender in growth the first year or two, but with age easily stretches up six feet. And the fruit possesses the rather singular combination of good flavor, along with beauty, good size, and firmness for shipping. Its lateness leaves room for a good early berry, but with its excellent productiveness it will prove hard to beat wherever it stands the winter, as well as it does in this northern lake region.

THE GREGG

occupies among black caps the place that the Cuthbert does among the reds. Yet the Gregg does not seem to be quite so hardy, nor will it succeed so well on sandy land. Still its great size, good quality, and especially its firmness, make it yet valuable to fruit growers.

FOR SANDY LAND

the Tyler or Souhegan is desirable. Its persistence, great bearing, good size and flavor are well worthy of commendation. Yet the man with well-drained clay loam must, as a rule, beat his rival of the sandy location in black cap growing, if other conditions are equal. The Tyler is quite profitable on sandy loam, but more so with more clay under it. So are red raspberries for that matter, but the difference is not so marked.

SUPERB, HANSELL, CRIMSON BEAUTY.

Which is the best? The question as to the largest—the Superb. But its berries are apt to come to pieces in the handling. The color is dark, the quality indifferent and productive. The Hansell is very beautiful and firm; quality better than Superb. Plenty good enough to sell, but requiring further test, as only one small plant was big enough to bear. Crimson Beauty is luxuriant in growth, and, seemingly, so far, very productive, while the berry is very handsome and large, but the flavor is about like Hansell and not so firm. Further testing is required as to earliness and comparative superiority on the average of these two kinds.

is hard to beat, where Lawton and Kittatinny freeze down as they do here. But the Taylor comes through in beautiful condition, and it is now bearing finely with me. It is not of the largest size; but an inch to an inch-and-a-quarter long gives a berry good enough to sell very fast at good prices, and plenty good enough to eat when it is of the sweet excellence of this variety. I like the Taylor, too, because it does not run all to rampant "wood growth" on rich land. Manure it as if it was a raspberry and see if it will not be remarkably profitable in any region too cold for peaches, which ripen at about the same time.—T. C. ROBINSON, Owen Sound, in the *Canadian Farmer*.

RELATIVE HARDINESS OF CERTAIN SMALL FRUITS.

The severe and continued cold of the past winter seems to have severely tried the endurance of many varieties of small fruits in this vicinity. Among strawberries Charles Downing, Kentucky, Bidwell, Miner's Prolific, Sharpless, Crescent, and, we may add, Big Bob, seem to have withstood the ordeal perfectly, even where left unprotected by the drifting away of the covering of snow; while, under similar circumstances, Champion, Triomphe de Gand, Finch's Prolific, Crystal City, and a long list of others, both old and new, are badly injured and in a few instances nearly annihilated.

The red raspberries, including the new varieties Hansell and Superb, have almost invariably escaped injury at least at the lake shore; although we cannot say as much of the cap varieties, some of which are somewhat injured. Shaffer, New Rochelle and Caroline, which are reputed hybrids between the reds and caps, are to all appearance unharmed, and the same is nearly or quite true of Davison's Thornless, Souhegan, Tyler, Ohio and Mammoth Cluster; but we regret to say that the new popular favorite, the Gregg, is open to considerable complaint in this respect.

We went carefully through our trial plantations of blackberries after growth had well started, and noted their condition as follows:—

Ancient Briton—Nearly untouched.
Brunton's Early—Badly injured.
Crystal White—Killed to the snow line; same last year.
Dorchester—Slightly injured.
Early Harvest—Killed to the snow line; same last year.
Knox—Considerably injured.
Kittatinny—Considerably killed back.
Lawton—Considerably injured.
McCracken—Slightly injured.
Missouri Mammoth—Slightly injured.
Snyder—Entirely uninjured.
Stayman's Early—Slightly injured.
Stone's Hardy—Entirely uninjured.
Taylor (*Prolific*)—Uninjured.
Wachusett Thornless—Uninjured.
Wallace—Nearly uninjured.
Western Triumph—Uninjured.
Wilson's Early—A good deal killed back.

We set a few trial plants, a year since, of the brownish pink blackberry, of which samples

were sent to the *Farmer* by Mr. Parrish, of Barry Co., last season. These made a fair growth last season, and came through the winter entirely uninjured. The plants made a moderate growth last year and are producing fruit this season. The wood as well as the fruit is very light in color.

Snyder, Taylor, Stone and one or two others will set a full crop of fruit this season, while Early Harvest and Crystal White do not show a live fruit bud.

Bartle, Mammoth and Lucretia dewberries are set for an abundant crop of fruit, as they were, of course, out of harm's way, under the snow, during the winter. Last year we hoped for something from them but they produced "nothing but leaves."—T. T. LYON in *Michigan Farmer*.

THE CLIMBING SOLANUM.

(*Solanum Jasminoides.*)

The climbing Solanum is a slender growing vine having pretty foliage. It supports itself by curling the stems, to which its leaves are attached, about whatever it comes in contact with. During summer my plant made a growth of over six feet. It did not bloom until fall, but since then it has had flowers nearly all the time. These flowers are about as large as those of the Catalonian Jasmine, star-shaped, and of a pearly white. Sometimes they have a slight lavender tinge, and in a few I have seen a faint rosy tint. These flowers, which are borne in clusters of about half-a-dozen each, have a delicate grace that I have never seen in any other climbing flower. The petals have a look like that of the finest crape, being creased or wrinkled like crape along the center. I find that by cutting it back often a great many branches can be made to grow, and all of these produce flowers.

It has been one of my most satisfactory plants during the winter. I have it trained up a large Oleander, and it has wound itself all through the top, and as both plants are in bloom at present, the effect is charming, as the contrast between the rosy flowers of the Oleander and the white ones of the Solanum is so decided. A good many of the new branches hang from the branches of the Oleander in festoons of graceful foliage. The buds are charming before they open, being pearly white, and having so close a resemblance to berries that they are often mistaken for them. The plant is a most satisfactory one at all stages and seasons. It would be very effective when trained along conservatory rafters, or about a window, I think. Mine is potted in ordinary garden soil made light with sand. It requires considerable water. The red spider would trouble it somewhat if I did not make it too wet for him.—E. E. REXFORD, in the *American Garden*.

THE PLUM ORCHARD IN MAINE.

I send you a description of Mr. Sharp's plum orchard. The orchard comprises fifteen hundred trees, covering one and one-quarter acres. Two-thirds of the trees are tender varieties (for here), Bradshaw, Columbia, Green Gage, Imperial Gage, Lombard, Magnum-Bonum and McLaughlin, which will not live one winter here without bending down. They were planted out in 1877 before the Mooer's Arctic had been thoroughly tested, the remaining five hundred are Mooer's Arctic, most of which have been set out since, and yet these five hundred bore more last year than the other thousand by considerable. There was picked from this orchard last season three thousand

five hundred pecks, which were sold here at one dollar per peck, besides what were given away, and quite a number that walked off in the night. He has another orchard just coming into bearing which yielded six hundred pecks, and one hundred more out of the nursery of trees that will be sold this spring, making in all four thousand two hundred pecks—a net profit of over four thousand dollars in one year. Although the Mooer's Arctic plum will live here and bear a good crop without bending down, if kept in grass ground and grown slowly, yet we find it far more profitable to put them on rich ground, and bend down.—*Home Farm.*

HOW THE CHILDREN ANALYZED A DAISY.

'Twas the afternoon of a summer's day,
The air was fragrant with new-mown hay,
The fields where the scythe had not passed over,
Were covered with buttercups, daisies and clover.
And then, from the midst of the flowers so gay,
Came jubilant voices of children at play.

But every delight was unheeded by me,
As I sat at the window with Gray's Botany;
A poor little daisy I rudely dissected,
And then through a microscope closely inspected.
Then turned to my book and endeavored to see
My way through the mazes of "compositæ."

Swiftly the afternoon hastened away,
And the children, all weary and warm with play,
Came pressing around me their treasures to show,
And asking what auntie was studying so.
My quiet was over, that surely was plain,
But my afternoon's labor had been all in vain.

Slowly I lifted my poor aching eyes
From the mystical words of the botanist wise,
Lifted the flower where in fragments 'twas lying,
Threw it out of the window, then hopelessly sighing,
I turned and then giving pet Mabel a kiss,
Said, "My dear, can you tell me what a daisy is?"

"A daisy!" cried Mabel. "A daisy," cried all,
Their pitying wonder how well I recall!
Then Mabel informed me, all glowing and flushing,
Her sweet childish prattle to low whisper hushing,
That daisies were children of fairies at play,
And they wore their best dresses of white every day.

"Ho, Ho," shouted Tommy; then quicker than thought
A wonderful work in a daisy was wrought—
He seized my best scissors, the mischievous fellow,
And clipped the white petals quite close to the yellow,
All the petals but two, which he left in one place,
And then in the center he marked out a face.

"See there!" shouted Tom. "In each daisy I see,
There is waiting a little old woman for me."
And there, to be sure, was a snowy cap border,
With strings hanging down as if just made to order,
With the little round face, with complexion so bright,
Made the whole, I assure you, a comical sight.

But while I was laughing at Tom's piece of fun,
Gentle Annie came forward, our slow, dreamy one—
"Why, auntie," she cried, with accents appealing,
"I thought they were fortune-tellers, revealing
Wonderful secrets delightful to know—
Don't you remember, you said it was so?"

Ah, yes! I remember that morning full well,
And the beautiful fortune the daisies did tell;
And how in the evening was brought me a letter,
Which told the same story in language far better;
So I said, as I carried my text-book away,
"The children are wiser than you, Dr. Gray."

Christian at Work.

FORESTRY IN JAPAN.—The Japanese native papers are crying out against the extinction of the lacquer industry of the country. The tree from which the varnish is obtained is disappearing. Formerly, like the mulberry tree, on which the silkworm feeds, it was protected by law. Each family of the upper classes was obliged to rear one hundred trees, the middle classes seventy, and the lower classes forty. Since this law fell into desuetude the cultivation of the lacquer tree has rapidly declined. The trees were cut down without care, and none were planted to replace them, so that they have become exceedingly rare, while the price of lacquer has enormously increased. Similar complaints, too, are heard of the process of disafforestation going on in Japan since the ancient law which required every one who cut down a tree to plant two in its place was abolished.—*Farmer and Fruit Grower.*

PERPETUAL PELARGONIUM GRANDIFLORUM.—Among the many classes of pot-plants grown in greenhouses, the Pelargonium tribe does certainly occupy one of the first places, on account of its handsome flowers, as well as the great variety of color. The greatest fault with them, so far, has been that the period of their flowering is so short. This imperfection seems now to have been overcome by Mr. Vanden Heede, of Lille, who, by artificial crossing of *P. Gloire de Paris* and *Gloire de Crimée*, has obtained a variety which is constantly in bloom. The flowers are large and of good form, the lower petals light vivid pink, the upper ones darker and spotted deep purple, center white. The foliage is well formed and light green. It is evidently a grand acquisition, competing with the Zonals, with which it is desirable that it should be crossed in the manner Mr. Wills has crossed them with *P. peltatum*. To the intelligent experimenter there is a wide field open in this direction.—JEAN SISLEY, Lyons, France, in *American Garden.*

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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 7, Issue 11* edited by D. W. (Delos White) Beadle]