



THE
CANADIAN
Horticultrist.

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CUT-LEAVED MAPLE.

T H E

Canadian Horticulturist.

VOL. VIII.]

OCTOBER, 1885.

[No. 10.

THE CUT-LEAVED MAPLES.

We present our readers this month with a colored plate of Weir's Cutleaved Maple. Fully a dozen years have passed since this tree was introduced to the tree planting public, and although it is perfectly adapted to our climate, and thrives almost anywhere, one seldom meets with a specimen growing among the trees on our lawns. Our neighbors over the border have planted it very generally, so much so that it is regarded as one of their most popular ornamental trees. It would not be very surprising to us, judging from its rarity here, to learn that a large proportion of our readers were quite unacquainted with its appearance. To them at least the colored plate will be a new revelation, making them acquainted with a maple whose foliage and habit are among the maples, what the Cutleaved Birch is among the birches.

This tree is a variety of the Silver Maple. The form of the leaf varies from that of the type in being much more deeply cut, as will be seen by a glance at the leaf shown on the plate, where the contrast between the color of the upper and under sides, as well as the peculiar shape of the leaf, is well brought out. The young shoots are also much longer and more slender, hence more drooping in habit. Like the parent Silver Maple it is of very rapid growth, and its delicately cut leaves have the same silvery whiteness on the under side, which gives name to the species. The leaf stalks are long, and tinted with red on the upper surface. The contrast and blending of these varied colors, when the long slender branches are swaying in the wind, are very pleasing. An avenue planted with this cutleaved variety would be a very attractive and interesting feature of any of our cities.

Another cutleaved variety from seed of the Silver Maple originated in the grounds of Messrs Ellwanger and Barry. It is quite upright in its style of growth, and the young shoots have none of the slender, drooping habit which is such a distinguishing feature of Weir's. The leaves are remarkable for great diversity of form, some of them are even more deeply cut than are those of Weir's, and others again will be but slightly lobed. This also is a very rapid growing tree, a feature so generally desired by planters in these hurrying days.

A third variety, raised in the grounds of the same establishment and from seed of the Silver Maple also, having much the same habit of growth as the one last mentioned, is remarkable for having its leaves lobed almost to the midrib in such fashion as to give to the leaf a three-parted appearance; hence it has received the name of three-parted Maple.

There are also cutleaved varieties of the Norway Maple. One of these has its leaves divided into three parts much after the style of the one last mentioned. Another is known as Lorberg's,

which differs but little from the preceding. The most distinct and unique cutleaved variety of this species of maple is known as the Eagle's Claw. The leaves of this are not only very deeply cut, but the divisions are very sharp pointed, giving to them such a marked resemblance to the claws of some large bird of prey, that it is very appropriately designated by the name it bears.

These maples, as indeed is nearly all the genus, are hardy, enduring our climate perfectly; they flourish in almost every soil, are seldom defoliated by insects, and are withal very ornamental.

NOTICE TO NEW SUBSCRIBERS.

If any of our new subscribers desire to have the Report of the Fruit Growers' Association for 1884, and the *Canadian Horticulturist* for 1885, Vol. VIII., complete, by remitting sixty cents additional these will be forwarded to them post-paid. For \$1 60 you will receive the Report for 1884 and for 1885, and the *Canadian Horticulturist* for the years 1885 and 1886.

CANADIAN HORTICULTURIST FOR 1886.

PREMIUMS FOR OBTAINING NEW SUBSCRIBERS.

We desire to extend the circulation of this magazine to at least double the present issue, and appeal to our readers to help us. We think you can unhesitatingly recommend it as being fully worth more than the subscription price to every one who cultivates even the smallest garden. In order to make you some return for your kindness in procuring new subscribers we will send you any one of the following collections of bulbs or plants on the receipt of five new subscribers and five dollars, namely:—Collection No. 1, one *Chionodoxa lucillæ*, one *Lilium longiflorum*, two *Fritillaria meleagris*, two Spanish Iris, and two *Narcissus poeticus*; No. 2, five Tulips, two Chinese Peonias, one Spotted Calla, one Tiger Lily; No. 3, a collection of five different lilies; No. 4, a collection of five different sorts of Iris; No. 5, two double and two single Hyacinths, and three double and three single *Narcissus*; No. 6, five herbaceous perennials, *Fraxinella*, *Blyanthus*, Japan Anemone, Japan Spirea, *Clematis erecta*; No. 7, three hardy flowering shrubs, *Hydrangea paniculata*, Spirea Van Houtte, and purple Fringe; No. 8, twelve papers of flower seed of different sorts.

For ten new subscribers and ten dollars we will send any two of the above collections that may be desired, or if preferred will send one yearling tree of the Russian Vladimir Cherry, the stock of which was imported by the Fruit Growers' Association direct from Russia.

Every new subscriber will receive the *Canadian Horticulturist* from the time his subscription is received until the end of the year 1886, also the Report of the Fruit Growers' Association of Ontario for the year 1885 as soon as it is printed, and which ever one of the following articles he may prefer to have sent him in the spring of 1886, namely, either (1) three plants of the Atlantic Strawberry, or (2) a yearling tree of the Russian Yellow Transparent Apple, or (3) a plant of the Lucretia Dewberry, or (4) a yearling Vine of the Early Victor Grape, or (5) two plants of the Marlboro' Raspberry, or (6) a package containing three varieties of flower seeds. These will be sent by mail prepaid to the subscriber. The collections mentioned above will be sent prepaid to the address of the person who remits the money and new subscribers names.

Of the Fruit Growers' Association of Ontario was held in the Town Hall, Wingham, on the 16th and 17th of September, 1885; at which the following Officers were elected for the ensuing year, namely: President, Wm. Saunders, London; Vice-President, A. McD. Allan, Goderich; Directors: John Croil, Aultsville; A. A. Wright, Renfrew; J. R. Dunlop, Kingston; P. C. Dempsey, Trenton; Thos. Beall, Lindsay; W. E. Wellington, Toronto; Murray Pettit, Winona; A. M. Smith, St. Catharines; F. Mitchell, Innerkip; J. A. Morton, Wingham; J. M. Denton, London; W. W. Hilborn, Arkona, and Charles Hickling, Barrie. Auditors: Charles Drury, Crown Hill, and James Goldie, Guelph. Secretary-Treasurer: D. W. Beadle, St. Catharines.

WANTED.

A few copies of the January number of the *Canadian Horticulturist* for 1882, Volume V. We will send in return therefor Vol. I., II., III. or IV. complete, if desired.

EASY LESSONS IN BOTANY.

BY H. B. SPOTTON, BARRIE.

LESSON IV.

For this lesson we shall require a lily of some kind—any variety found in the garden will do, or in spring-time our native Dog's-tooth violet will answer the purpose admirably—and a specimen of the well-known Calla, popularly regarded as a lily also, though not at all related to the true lilies. If you have the common tiger-lily at hand, and can procure a complete specimen, root and all, you will find at the very base of the stem a swollen mass, made up chiefly of fleshy white scales, from the midst of which the stem ascends. These scales may all be removed in succession until nothing is left except the flattish piece to which they are all attached by their lower ends, and from the lower side of which the large fibrous roots are given off. These scales are fleshy underground leaves, and a mass of them such as we find here is called a *bulb*. You will at once think of the onion, with its coats which can be peeled off one after another, as another instance of a bulb, and of the tulip, hyacinth, &c., as masses of similar structure. The stem of the lily, then, rises from a bulb, and in the plant now before us numerous leaves are developed on the sides of the stem. These leaves, when compared with any of those belonging to the plants already examined, show very marked differences. There is no appearance of a petiole, and as the blade is attached directly to the stem the leaf is said to be *sessile*. The veining, you will see, is peculiar. Here there is no network such as we found in the other leaves, but the veins run the whole length of the blade without branching. This arrangement of the veins is described by the term *straight-veined*. Many other instances of this mode of veining will also occur to you. Every blade of grass is an example. The leaves of the Calla, also, are marked in the same way.

The flowers next invite our attention. You see that they are produced near the end of the stem, but as each of them arises from the axil of a bract the inflorescence will be described as *axillary*. Whilst you are looking at the upper part of the stem you will doubtless notice the little black bodies in the axils of many of the leaves, and perhaps will wonder what they are. If you dissect one of them with a sharp knife you will discover it to be a bud, a good deal resembling the bulb in its structure; it is, in fact, what is called a *bubblet*, and if you look about the old plants in the spring you will find that the bubblets which have fallen to the ground in the autumn have sprouted and produced new plants. In the flower of the lily the showy part consists of six similar

pieces, curved backward, or *recurved*, as the botanist says. These six pieces are in two sets of three each, one set being outside the other, but as they all so closely resemble each other it will be better not to call one set the calyx and the other the corolla, but to describe the two sets collectively as the *perianth*. In that case, though the parts are all separate, we can not very well use either of the terms polysepalous or polypetalous to describe that fact, but shall adopt a new term, *polyphyllous*; and so also, if we find the parts of a perianth joined together, we shall use the term *gamophyllous* to describe that fact.

The parts of the perianth will be found to be attached to the receptacle.

The stamens are six in number, and you will observe that the anthers are attached by their centres, and swing freely about, discharging great quantities of dark brown pollen. Anthers which swing about in this way are said to be *versatile*.

The pistil has its three parts, *ovary*, *style*, and *stigma*, well marked. The upper part of the style and the stigma are three cornered, and the ovary is six-lobed. If the ovary be cut across it will be found to be three-celled, with two rows of seeds in each cell.

Now it is desirable to notice the prevalence of the number three in relation to the parts of this flower. The perianth is in two sets of three each; so are the stamens, and the ovary clearly consists of three carpels. The flowers of our first group of plants had not their parts in threes, but for the most part in *fives*. So that we have now discovered at least two important differences between the lily and the other plants examined: first, in the veining of the leaves, and secondly, in the number of parts in each floral whorl.

Now we may turn to the Calla, which by the way is not properly a Calla, but a Richardia, from South Africa. The leaf stalks and the scape which bears the brilliant white lily-like growth at its summit may be easily traced downwards to their origin in a thick underground stem, which differs from the lily-bulb in being a solid mass, incapable of being separated into scales or coats. This underground stem of the Calla is a kind of *tuber*, not altogether unlike a potato in its structure. The leaves, you observe, are straight-veined, but, unlike the lily leaves, have both blade and petiole.

We are chiefly concerned, however, with the flower. The white showy part is in one piece, enfolding below a curious kind of stalk or column, and expanding above. Let us carefully remove this lily-like leaf, so as to completely expose the column it contains. The lower part of this column is now seen to be crowded with small greenish bodies, whilst the upper part is surrounded by innumerable yellow projections, which on closer inspection turn out to be *anthers*. The greenish bodies at the base on examination prove to be *ovaries*, so that we have here an entirely novel arrangement of stamens and pistil, these organs being crowded together about a fleshy column or axis. Such a column is known as a *spadix*, and the white leaf which we removed is merely a kind of bract, and not a calyx or corolla, as you would at first probably suppose. Such special bracts as these, surrounding a spadix, are known as *spathes*. If in the spring you can find a specimen of Indian Turnip, or of our common Marsh Calla, you will see that the structure of the flowers is similar to that which we are now examining.

The lily, then, with its colored perianth, is a type of one group of plants, while the Calla, with its spadix and spathe, is a type of another group. In both, however, the leaves are straight-veined, and there are also some other resemblances which will be pointed out presently.

CORRECTION.

We do *not* need any copies of the January number of this year. The year 1885 is an error, it should have read 1882, Volume V.

Doctor Haskins says, in the *Rural New Yorker*, that this is the apple which has become quite popular in Lower Canada (Province of Quebec) under the name of Late Strawberry; that it originated in Groton, Massachusetts, and that the tree is of slow growth and ungainly in form in the nursery, not long lived but very productive, ranking in hardiness about with the Fameuse, but not a true ironclad.

ONTARIO STRAWBERRY.

Mr. John Little, of Granton, our Strawberry King, says of this variety that the plant is healthy, foliage good, fruit large to very large; by early picking it would ship a good distance. I can recommend the Ontario, after two years' fruiting, as worthy of dissemination.

THE CENTENNIAL CHERRY.

Last July we received through the mail a little tin box in which we found a number of fine cherries, every one of which was perfectly sound and in excellent eating condition. It transpired that these cherries had been sent to us from Napa City, in California, and had taken this long overland journey in the mail bags during the hot weather of that month, and had come through without injury. We found the fruit on sampling it to be very firm fleshed, sweet, rich, and of excellent flavour.

It was sent us by Messrs. Coates and Tool of that City, who inform us that it is a seedling from the Napoleon Bigarreau, that it first bore fruit in 1876, from which circumstance it derives its name. The tree is said to be a heavy grower with coarse wood, and very glossy, shining leaves; fruit spurs to be developed on many trees at one year from the bud; its habit low and spreading, and thus far an early, abundant and regular bearer. The cherries are large, of a pale yellow color splashed and marbled with crimson, the flesh very firm and sweet, with a small stone.

If the tree should prove to be sufficiently hardy to endure our climate, and the fruit exempt from that tendency to rot so often found in our sweet cherries, we believe that this would be a most profitable cherry to plant for market.

QUESTION DRAWER.

(1.) Some two years ago I noticed in the *Horticulturist* some mention of fruit culture in Algoma, and would be glad to hear what kinds have fruited there after the severe test of last winter.

(2.) Also I have heard parties argue that it is very important in transplanting to mark the trees, so as to keep the same side to the north as before. Is this of any consequence?

HENRY J. BIRD.

-
- (1.) Will our readers in Algoma please reply to this inquiry.
 - (2.) If any have made experiments by way of testing the importance of marking the north side, will they please to communicate the result. We have never paid any attention to this matter of the north side when transplanting.
-

DEAR SIR,—I have a few questions to ask, the answering of which through your valuable and interesting journal will greatly oblige.

1. Many of my Cuthbert and Turner Raspberries have had some insect working on them doing much damage; the grub works round the cane in rings, generally two, about an inch apart, just below the skin, which prevents the sap rising, causing the shoot to wither up and fall off. What is the best remedy—cut the shoot off and burn it?

2. When is the best time to use ashes to my strawberries and bushes, spring or fall, and about what quantity may I use (with safety) to each plant and bush?

3. I find that in the January number of the *Canadian Horticulturist* you speak and give an illustration of a large *yellow* gooseberry, "The Large Golden Prolific." Have you fruited it and found it as represented?

4. Let me know the best *red* gooseberry.

5. When is the best time to take root-cuttings of black-caps, and the method of taking them; is it merely dividing the root between the canes, leaving the canes with so much root attached?

Yours respectfully,
E. ROBINSON.

London South, Ont., Aug. 17, 1885.

REPLY.—1. This is done by the raspberry cane-borer. See Saunders' "Insects Injurious to Fruits," page 305. If you have not a copy you are without one of the most valuable books written for fruit growers. A copy will be sent to anyone, post-paid, who will send us twelve new subscribers and the twelve dollars. The best remedy is to break off all the withered twigs at the lowest ring and burn them.

2. The spring is probably the best time; yet the time, fall or spring, is not a matter of much importance. The quantity depends upon the strength of the ashes, whether leached or unleached, whether from hard wood or soft wood; and upon the size of the plant or bush. Try a small quantity—a gill, or a pint, or a quart—graduating it according to the size of the plant and the strength of the ashes, and if you think after the trial that more would be better, then increase the quantity slowly.

3. We have not fruited the Golden Prolific Gooseberry.

4. Hitherto the Crownbob has been considered the best *red English* gooseberry. Lately the Industry has been advertised as the most prolific, and not subject to mildew. The best *red American* gooseberry that we have tested is the Houghton.

5. We have never propagated Blackcap Raspberries from root-cuttings or division of the stools. The growing canes root freely at the tips in the autumn. These rooted tips are taken up in the spring and planted.

WHAT THE PEOPLE SAY.

NEW STRAWBERRIES.

(*To the Editor of the Canadian Horticulturist.*)

There is always a risk in buying new varieties of the strawberry, and those who love this fruit, so pleasing to the eye and taste, will run the risk for better or worse.

If there is any fruit outside of Eden's lovely garden that sin has not marred its beauty, it is the strawberry.

I have tasted every variety that has been offered to the public, and some that have not been offered yet; and some have not proved satisfactory here.

If we only had a testing plan in Canada like the *R. N. Yorker's*, and have the patience to await the decision of such men as President Saunders, Beadle, Dempsey, Croil and Bucke. But until we get this boon let us be sparing in our investing much in new varieties without the recommend of such parties as the *R. N. Yorker*, President Lyon, M. Crawford, C. A. Green, R. Johnston.

In 1884 I got the following varieties:

Prince of Berries.—Like all of Durand's seedlings it requires the best of cultivation, and more care than most men can give who grow largely for market. The berries are large in size and beautiful in color; plant healthy; late in fruiting; not profitable here for market.

Atlantic.—This has proved the most profitable here of all the new varieties of 1884. Plant vigorous and healthy; foliage large; very productive; berries large and good.

Legal Tender.—The fruit is from medium to large; uniform in shape; firm, rich color; not very productive; pistillate.

Iron-Clad.—The plant of this variety would please any man (or ought to). It is the strongest grower we have, making large stools; color light green; fruit large, firm; ripens early.

Vineland.—A vigorous, healthy plant; more so than Kentucky, which it resembles in fruit and plant.

Conn. Queen.—Late, vigorous, and a good bearer; color not bright enough for market.

Lawn.—A healthy plant; productive; berries all shapes; quality not the best.

Cornelia.—I have fruited this variety the first in Canada, but will give the experience of others about it:—A very late berry of great merit; the plants are large and stocky; the fruit is in shape and size like the Jucunda, very firm and of good quality. The Cornelia will be a profitable market berry, for the season that it has the market mainly to itself.

The new varieties of 1885:

I have not fruited yet the one disseminated by reliable men, none having any pow-wow over them but the Parry.

The *R. N. Yorker* says:—"Parry gives us our earliest and finest berries this year." The foliage is scanty, and does not seem to ripen the fruit late in the season. A light bright crimson in color; the quality is not so good as the Prince of Berries.

May King.—A seedling of the Crescent, with perfect blossoms, and said to be even earlier. Plants vigorous, healthy and productive; fruit large, bright scarlet, and best quality.

Jewell.—A seedling of P. M. Augur & Sons now offered for sale this fall. They sent me some plants this spring. The plant is large and healthy, and a good grower. The *R. N. Yorker* says, June 21st:—"Jewell is now in the height of ripening. The peduncles are strong and bear from 5 to 14 berries; some plants have from 4 to 5 peduncles, so that such plants may be said to be laden with fruit. No other has ever given us more fruit to a given length of row."

Amateur.—June 25th—Amateur is very prolific; the berries drop from the peduncles rather

too easily; the color a light red, the flesh white or rose-colored; they are regular in shape, and the quality is somewhat better than Jewell.

Hathaways, Nos. 3, 5 and 9.—These were sent me by President Lyon in 1884. They fruited here this season; they did not ripen here till June 22nd; they did about the same here as at the *Rural* grounds. I would not like to give a verdict on No. 3 until another year's trial. No. 5, color brilliant crimson, shape conical, quality excellent, plants vigorous and fruitful. No. 9 began to ripen a few days after No. 5. Plant very vigorous; a nice berry; color red, golden seeds, which makes it look very handsome.

Needle's Seedling, Iowa.—I got these at the same time as *Hathaways*. Plant a dark green; not very stocky, but healthy; very like the *Wilson* both in plant and fruit, but commenced to ripen with the *Crescent* and gave more or less fruit to the end of the season.

Crawford's No. 6.—Not yet offered for sale. I like to be among *Crawford's* seedlings, they respond so quickly to my soil and care. I have no interest in plants sent me for trial beyond truthfully stating how they have done here. No. 6 is a very large berry, well formed, bright red, and good quality. I have not yet grown anything to beat it for size and beauty, and sold by weight all other varieties would be in the shade.

R. Johnston's Seedling, "Ontario."—I have fruited it for two years. From our experience with it we believe it is worthy of all he claims for it. The blossom is large; stamens being very strong, securing perfect fertilization, and as it is quite firm its large size and bright appearance recommend it as a market berry.

Respectfully yours,
JOHN LITTLE.

Granton, August 24, 1885.

EXPERIENCE FROM THE COLD NORTH.

The winter of 1884-'85 is one that will linger for years in the memory of fruit-growers as one of disaster and disappointment; yet at the same time it is one replete with knowledge most valuable to the professional fruit grower as well as to the amateur who chances to reside in a cold northern clime.

It is particularly disheartening to cultivate your fruit-bearing trees successfully for several years, and then, just when you begin to hope and believe that you have at length secured a collection of trees that will withstand the rigor of your climate, to have one of those "test winters" come moving along and sweep nearly all before it. Such an one is that through which we have just passed.

We have learned, however, that in apple trees the cold-resisting powers are greatest in the following:—

The *Wealthy* must stand at the head of the list. On every side we hear nothing but good reports of its hardiness and excellence of fruit. So far at least as we now know it is the longest keeper we can grow, and is in every respect a most desirable tree to plant.

The *Yellow Transparent*, too, came through the past season without the loss of a single bud, and my trees are now (August 20th) laden with beautiful golden yellow fruit almost ripe enough for the harvest. It is the earliest ripener I have yet grown, and being undoubtedly hardy is a very valuable and desirable tree to plant.

The *Peach of Montreal*, as well as the *Alexander*, can also be highly recommended for extreme northern sections.

You will doubtless be surprised to learn that the *Duchess of Oldenburg* has this season not sustained its well-earned reputation for hardiness and endurance of extreme cold. Mine are not dead, but strange to say that in the spring they failed to leaf out as usual, but instead there came quite a profusion of blossom, which soon died away, leaving only a bleak, leafless tree, having all the appearance of a dead worthless thing. In about three weeks, when the later rains came on, signs of returning life were to be seen, and in the course of time new leaves appeared, and although there is no fruit I have hopes that the trees will yet survive and be of some use to me.

I may add that this is exactly the experience of several of my neighbors, and applies not only to the Duchess, but also the Tetofskey, Scott's Winter, Canada Baldwin, Magog Red Streak, and several other so-called ironclads.

The death-rate, however, is not confined to our older varieties, but sad havoc has been made among the Russians.

Experience here goes to show that these are not all by any means hardy, but only after years of trial shall we be able to know those that will withstand our climate.

I may here state that I have just received a letter from Mr. Wragg, of Iowa, in which he also states that "a very considerable weeding will have to be done among the Russians before we shall know just what to plant." I have not yet received reports from all the trees of this kind that have been planted in this section, but enough is now known to warrant me in saying that Cardinal, Belle de Boskoop, Peter the Great and Red Russian are entirely worthless for this section, and the same can be said of several more that are known to me only by numbers.

Among a consignment of those trees received from Prof. Budd there were half a dozen pears. They came without any number or name, and they were given no great attention, as I do not care to have a fruit the name of which I cannot tell. However, they have so far done remarkably well —living through last winter without the loss of a single bud, and as they are all Russian varieties I am hopeful of something that we have been so long and so anxiously looking for, viz., a pear that will live and bear fruit in our northern home. If we have found it, it will be an acquisition indeed.

More anon.

A. A. WRIGHT.

Renfrew, August 20th, 1885.

THE FRUIT GROWERS' ASSOCIATION.

Dear Mr. Secretary,—I find that my horticultural life would be incomplete without membership in an institution so useful and so national. I think it is quite safe to say that the Fruit Growers' Association of Ontario with its organ, the *Canadian Horticulturist*, well represents and gives body and voice to the spirit of rural refinement in Canada. But more than that, it is a factor of the highest value in developing those sources of wealth and of beauty, which together more than any other thing must yet make our Canada the most delightful land in which to live.

Yours truly,
S. P. MORSE.

Milton, August, 1885.

STRAWBERRIES AND RASPBERRIES.

I commenced our picking of the strawberry on June 19th. The Crescent still takes the lead, and this year the choicest fruit I ever had from this variety, and sold at twenty cents per quart. The next in ripening was Phelps or Old Iron-Clad. Remarkable for its large size and very productive. Next Wilson's Albany, a medium crop of medium size berries. Whatever it may do in other places, it does not succeed here. Mr. Piper set the following this season: Jumbo, Big Bob, Col. Cheney, Sharpless, Jas. Vick, and some others. Manchester, a splendid berry and plenty of them. Daniel Boone, one of my favorites, an old friend, and one that keeps its size to the last.

Captain Jack—Plant and berry all that can be desired. Berry larger than the Wilson, more of them and better flavor. Kentucky and Vineland resemble each other, both late, of good size, rather soft for shipping a long distance. I have been testing more of the new varieties, and all prove worthless here, except the Atlantic.

There has been an extraordinary crop of the strawberry in our locality this year, and after all prices ruled so low it did not pay the cost of labor attending them. I have not found prices so low before, down to four cents a box. Growers from a distance came to our local villages and almost giving them away, putting this healthful, luscious fruit in reach of both old and young in town and country.

I am sure the readers of the *Horticulturist* must be pleased with my friend Robinson's article on his experience with the strawberry this season. From his long list of varieties the most fastidious might select what would please them.

There are two varieties in his list that he is wide of the mark in comparing them with the old sorts he mentions. Jockey Cap colors all at once, whilst Miner's Prolific shows the white feather in his tail, and does not ripen evenly. There is no resemblance in the two varieties in either plant or fruit. And the Howell looks more like the Manchester, but is not. In respect to these his judgment is hasty and too soon.

RASPBERRIES BLACK.

In raspberries there has been a ready market here and prices good without foreign competition, there also has been a very fair crop. The first to ripen was Tyler. I prefer it to Soughegan, as it was subject to rust. Hopkins a little later and berry a little larger. Then comes Ohio, the best of the three here every way. There is not much demand for the Red Raspberry here, the wild ones are so plentiful, but still we grow such as Arnold's Red, Redder, Cuthbert, Rancocas, Hansell. This one has done well, owing, as I suppose, to the plants being more mature.

JOHN LITTLE.

Granton, August 9th.

GRAPE GROWING IN CENTRAL ONTARIO IN THE FUTURE.

There is at present reasonable grounds for expecting a fairly good grape crop in Central Ontario this season. If this expectation is realized it will do much to confirm the opinion which is so rapidly gaining ground respecting the capabilities of this Province for the production of wine, and of its being one of the most profitable branches of husbandry suitable to the soil and to the

climatic conditions of large tracts of land in Ontario. "Live" men are already looking about them for suitable lands for vineyard purposes on which large sums of money will undoubtedly be soon invested.

But few persons comparatively have any clear idea of the profits resulting from a judicious investment in this business. Farmers no doubt would be well pleased if they could be assured of say 30 bushels of wheat to the acre, and especially so if they could also be assured for many years in the future that they would obtain \$1 25 per bushel therefor. Yet in this case the gross sum realized per acre would amount only to \$37 50.

A vineyard producing a crop of grapes proportioned to the yield of wheat, even if sold at the small sum of *one cent per pound*, would produce over \$100 per acre.

Now we have—as shown in pp. 80-82 of the present volume of the *Canadian Horticulturist* —an almost unlimited area of land in Central Ontario, where both soil and climate are more suitable for the profitable production of grapes than that of the larger portion of the wine-producing countries of Europe. Scott Act speakers are already predicting an over-supply of grapes for dessert purposes at an early date, and fear (?) wouldn't they like it) the surplus may be made into wine. We have no sympathy with such croakers, and sincerely hope the time may soon arrive when a very small proportion of the grapes grown in Ontario will suffice for dessert purposes for all our people, even though excellent fruit may be obtained at five or six cents a pound. The balance can then be made into wine, for which purpose good sound grapes are worth from 3 to 5 cents per pound. For Canadian wine there is an unlimited demand; England alone will be glad to get all Ontario can produce for generations to come, and at highly remunerative prices.

The vineyardist may therefore reasonably expect that for generations to come from \$300 to \$500 per acre per annum may be realized from his vineyard if he sold his grapes to the wine-maker, and yet a larger sum if he became his own wine-maker. At the price of grapes given above, say from 3 to 5 cents per pound, a much better and more wholesome wine can be produced for less than \$1 per gallon than can usually be obtained in our markets.

Wine has been made in this vicinity by amateur wine-makers for many years past which has been pronounced by connoisseurs to be "good sound wine," many dozens of bottles of which have been sold in Montreal at more than double the price above named.

THOS. BEALL.

Lindsay, August, 1885.

BLACK RASPBERRIES FROM LAYERS.

I notice one of your correspondents wants to know if Black Cap Raspberries can be grown from layers. I answer, "Yes." I have grown all mine that way, and consider it the best.

F. W. PORTER.

Mount Forest.

FRUIT NEAR MOUNT FOREST.

All small fruits around this part of the country are a plentiful crop. Plums are nearly a failure,

the more tender sorts are dying off from the effects of last winter's frost, even the hardy Lombard did not escape altogether. I don't consider the much puffed *Arctic* plum to be hardy at all; mine got nearly killed the winter before last, and this last winter finished them. Neither is the Wealthy apple hardy with me, it too got cut to the ground these last two winters, although it still lives and has made good growth this season. (See page 224.) But the most complete fraud of the so-called Iron-clads is the Russian Mulberry. With me it would not stand a summer's frost. The Catalpa sent me by the Fruit Growers' Association this spring is doing first-class so far.

F. W. PORTER.

NOTES ON STRAWBERRIES.

The strawberry crop has this year been the largest ever gathered in Canada. Prices were low, but those who grew good fruit and sent it to market in nice clean packages in good condition, had no difficulty in disposing of their crop at paying prices.

They were very late: I made my first shipment, June 25th; and last shipment, July 24th.

First to ripen were *Early Canada* and *Old Iron-clad*, both of which are quite promising where locality suits them. They bloom very early, hence, are often injured by late spring frosts. *Old Iron-clad* is the best very early berry I have seen: fruit bright scarlet, of good quality, about the size of Wilson, and about four days earlier than Crescent.

Crescent Seedling is much the best and most profitable market berry I can find, fruit of better color than Wilson, ripens several days earlier, and much more productive. Although not quite so firm, it will stand shipping very well, will average perhaps a little larger than Wilson on my soil, (clay loam) grown by the matted-row system.

Wilson still holds a place in every well selected list of strawberries for market.

Capt. Jack is a splendid variety on clay loam, it is quite late, will average larger than Wilson; bright color, of good form, very hardy and productive; as firm as Crescent, does not do so well on sandy soil.

Among those of more recent introduction *Manchester* is perhaps the most promising. It is quite late, fruit large, light scarlet, of good quality; very productive, holds out well to the end of the season. Not firm enough to carry to a distant market, but for near market (say fifty miles) it is one of the best to plant in every plantation.

Daniel Boone ripens about midsummer. Fruit will average large and very even in size, fine bright scarlet, about as firm as Manchester; one that you need not be afraid to plant on either sand or clay loam, for either home use or market. I had it in full fruiting two seasons, this year I had over one-half an acre, and shipped them as far as Detroit (ninety miles) in perfect condition. No sort in my collection looked so well in the crate as Daniel Boone.

James Vick must be grown either in hills or very narrow matted-rows to make them profitable; they set more fruit than any variety can bring to perfection when grown in the ordinary matted row. I had about three-fourths of an acre this season, but allowed most of the rows to get too wide, hence the fruit was too small; but where grown in hills or very narrow matted rows, it produces a great crop of very bright scarlet fruit, about as firm and large as Wilson. Begins to ripen quite late, and holds out as late as any.

The plant is one of the most vigorous and hardy of any sort grown.

Arnold's Maggie has, perhaps, given us the largest quantity of fruit to a given space, of any in the collection. It begins to ripen with Crescent, and continues quite late. Fruit large, first picking nearly as large as Sharpless; not firm enough for a market berry, and not of best quality. *Arnold's*

Pride gives some very large fruit, not of good color or quality; it will not pay to grow it. *Bright Ida* not as good as Maggie, later, and not quite as productive.

Sharpless; largest of any, and quite productive some seasons. It will not pay to grow for market when we have so many varieties that are more reliable.

Bidwell is large and productive, but not firm enough for a good market berry.

Cinderella about like Bidwell in form and color; of better quality; not quite so large, but quite early.

Seneca Queen; very large and productive; good for home use, not firm enough for market.

Cumberland Triumph is one of the finest sorts for home use, plant very vigorous and hardy; fruit very large, of uniform shape, good quality, and productive.

Among the new varieties fruiting this season *Atlantic* gives promise of being the best late market berry I have seen among either old or new sorts. A berry must be very firm to make it a first-class late market sort, as late in the season weather is hot, and fruit ripens faster, hence, does not carry so well. The Atlantic is more firm than Wilson, in fact, it is the firmest berry I have ever grown; fruit quite large, conical, of a very rich, bright, dark red color, very productive, and altogether the most promising *late market berry* I have seen.

Ct. Queen. This new berry came to me from Connecticut as the best late market sort. I have had it in full fruiting condition, and find the plant most hardy of any; fruit of good quality, medium size, quite productive, not very firm, and of such a poor dull green color that will prevent it ever being planted to any extent.

Cornelia; another claimant for the latest market berry. I will have to give it another trial before saying much about it; must say that it has not come up to my expectations this year.

Woodruff No. 1. A new variety I received from Michigan, where it is said to be taking the place of Wilson as a market berry. Plant very healthy and vigorous, foliage somewhat like Wilson, better grower. Late spring set plants gave some very fine fruit, quite like Atlantic, not quite so firm, about like Wilson in that respect. I shall watch it with interest.

Prince of Berries is by far the highest flavored berry I have seen. Although not as productive as many sorts, it will give a fair crop, and its extra fine quality will well repay all growers to plant a few of them. All who visited my plantation during the fruiting season voted it the best flavored berry they ever tasted.

With me it is a good grower, hardy, and fruit medium to large size, quite firm, late, of a rich dark red color.

Lacon is a very strong growing plant, fruit of good size and color, very productive, quite promising.

Jersey Queen, *Sucker State*, *Grand Duke*, *Vineland*, *Legal Tender*, *Oliver Goldsmith*, *Belle*, *Nigh's Superb*, *Hart's Minnesota*, *Finche's Prolific*, *Ray's Prolific*, *Big Bob*, *Longfellow*, *Warren*, *Piper's Seedling*, *Marvin*, *Primo*, *Sterling*, *Gipsy*, and *Miner's Prolific*, have some good points, but as there is so many other varieties with a greater combination of good qualities, I think they could be dropped from the list, and leave a sufficient number to choose from. It does not pay to grow too many varieties.

May King, *Parry*, *Wonderful*, *Amateur*, *Jumbo*, *Moodna*, and *Polopel*, I have not had long enough to fruit to any extent. *Wonderful* is a new variety from Ohio; its name is said to be taken from its *wonderful* productive qualities. It came to me so late this spring, and in such bad condition that I did not expect to see a berry, but it is a wonderful good grower and produced some very pretty, bright glossy scarlet berries of good quality.

W. W. HILBORN.

Arkona, Ont., Aug. 29th, 1885.

NIAGARA RASPBERRY.

The Raspberry received a year ago from the Fruit Growers' Association has fruited, producing very fine berries, better flavored (to my taste) and larger than the celebrated Hansell, but not so early. It made a very fine growth last season, so I had about twenty shoots for transplanting. All these have borne this summer. It has another advantage over Hansell in that it is not attacked by the Raspberry Sawfly, which makes skeletons of the leaves. At least it was not injured last year, while Hansell was. Neither have yet been hurt by this fly this season; but on the other hand I fear (although last winter was an exceptionally severe one) it is tender. One of my neighbors covered his, and it was killed to the roots. I did not protect mine in any manner, and strange to say it was only partially killed back.

G. H. F.

Ottawa, 11th Aug., 1885.

WHITE FRINGE AND BIGNONIA RADICANS.

DEAR SIR,—I note your remarks in July number of the *Horticulturist* respecting the hardiness of Chionanthus, or White Fringe. I have had a specimen in my garden for some years; it is quite hardy in the severe climate of this region. Last winter, which was the coldest I ever remember, nearly all the plum trees and many of the apple trees were destroyed. The White Fringe had not a bud injured; it bloomed well in the beginning of July; it appears to grow rather slowly and keep the form of a low shrub, and is very pretty.

I saw a statement in the magazine that Bignonia Radicans was hardy; such is not the case here. I have repeatedly tried it, and always failed, it being killed to the ground about every third winter.

Yours respectfully,
GEO. ELLIOTT.

Guelph, Aug. 1st, 1885.

CULTIVATION OF HOUSE PLANTS.

(*Read by Mr. John G. Barker before the Massachusetts Horticultural Society.*)

Mr. Barker named as the first and most essential requisite for the cultivation of house plants, a good window facing the south; a bay window is preferable, as giving light on three sides. A glass door or sashes to shut off the window from the room is desirable, to exclude dust and cold draughts when sweeping or ventilating the room. Ventilation should always be given at the top of the window. Cleanliness cannot be too well attended to; it is as necessary to the health of plants as to that of our bodies. Washing the leaves with a sponge with water of the same temperature as the air of the room, as well as an occasional sprinkling on a fine day, which may be done with a small brush when a syringe cannot conveniently be used, will be a great help.

There is nothing more annoying to the cultivator of house plants than the green fly; smoking with tobacco is the best remedy, but however closely the partition between the window and the

room may be shut, the scent will get into the room more or less. Therefore, use an infusion of tobacco made by filling a pail with stems and pouring on them all the water the pail will hold. This should stand twenty-four hours and be used in the proportion of half a pint to a pail of water. The plants should be turned bottom up, placing the left hand over the top of the pot to prevent accident, and then plunging it in the solution once or twice, until the flies drop off. Some of this solution should always be kept on hand and used on the first appearance of the green fly. After using, the plant must be rinsed in clean water, of the same temperature as the room. A florist in Philadelphia kept his plants clean in this way without fumigating. A scaley insect more common on oleanders and other thick-leaved plants, adhering closely to the stems and leaves, is not so easily destroyed. These may be washed with whale-oil soap and water, or better, with Gishurst compound, an English remedy. A sponge dipped in a little sweet or kerosene oil, and wiped up the stem and under the leaves occasionally, will keep off the scale effectually. The speaker had applied this successfully to plants which had been neglected and got very dirty, using kerosene so freely as to have some misgivings how it would affect the plants, but they are now showing remarkably fine growth. The method given for destroying the green fly and scale will also be effectual for the red spider.

Injudicious watering is a great injury to plants; too much water is oftener the trouble than not enough. The soil on the top of the pot will indicate the need of water by looking dry, and, when water is given, it should be done thoroughly, and not in a mere driblet, that will not go half through the soil. No rule can be given for watering, except to give when the plants need it, and never without taking off the chill, if cold, by letting it stand in the room or adding warm water. Plants in warm rooms require to be kept moist at all times, but not saturated. As the days grow longer and the sun gets higher, and the plants begin to grow and flower, more water will be needed. For plants close to the glass a box filled with sphagnum, in which the pots may be plunged, will be of great help in keeping an even degree of moisture and avoid spattering the soil on the shelves and glass. *Lycopodium denticulatum* planted on the sphagnum, will give a clean green carpet for the plants, but must not be allowed to cover the soil so that it cannot be judged when water is required.

In regard to heat, a good rule is that when you feel comfortable yourself the temperature is about right for house plants, most of them being from temperate climates. But never be without a thermometer in the room; from 70° to 75° by day, and 45° at night, will be a good guide. The blinds should be arranged to slide between the shelves and the glass, and there should be outside shutters to put up in unusually cold weather. They should be light, and in small sections, so as to be easily put up by any one who happens to be at home.

As to the kind of plants, Mr. Barker recommended for each side of the bay window a vine of some kind, such as the variegated *Cobaea scandens* and tropæolums, or some of the maurandyas. One or more wires may be run up each side and over the top, on which to train the vines, and they may hang from the top in festoons. Then with some hooks in the top on which to suspend hanging baskets, the window will be well started. For these baskets, the *Saxifraga umbrosa*, better known as London pride, and the *Lysimachia nummularia*, or moneywort, though old and common, are very pretty; and with such other plants as good taste may dictate, the baskets will add much to the effect of the window.

A very pretty plant is *Torenia Fournieri*. The flowers are produced so freely as to form a complete bouquet; the habit is compact and the foliage dark green. It is an annual, and easily raised from seed. Callas are beautiful both in foliage and flower. Do not overpot them, for when pot-bound and well watered they bloom all the better. A very essential point in their culture is to give them a season of rest in summer by turning the pots on their sides under a wall or fence, keeping them there till they show signs of growth in fall; then shake off the old soil and repot in new, and bring to the light and water.

Geraniums will be the standard plants. Of the many good varieties, Mr. Barker recommended for single—General Grant and Orbiculatum, scarlet; May Queen and Master Christine, pink; Miss Gertrude and Mrs. George Smith, salmon; and Paul Lueca and Snowflake, white. For double varieties—Bishop Wood, crimson shaded with cherry red; Henry Cannell, bright scarlet, and Mme. Thibaut, pink. A few pots of carnations will work in well. Though petunias are considered common, nothing makes a better show. A few pots of mignonette, sweet alyssum and candytuft will add to the fragrance.

As to the arrangement, the plants above mentioned, and all soft-wooded plants, should be placed nearest the light, and the hard or smooth-leaved, such as ficuses, gardenias, dracænas, coprosmas, and *Hoya carnosa* in the rear. The best hoyas the essayist ever knew was grown in a window, where it was stimulated with soapsuds as regularly as washing day came round, and the same with gardenias.

Among bulbs, hyacinths come first, and should be potted in November and December and placed in the cellar, or out-doors, where they will not freeze, covering up the pots entirely. Here they will root, and by bringing in a few every week or ten days after the first of January a display of these beautiful flowers may be kept up many weeks. Crocuses and tulips may be had in the same way if desired.

The oxalis, sparaxis, and tritomas must not be omitted, and cyclamens are admirable window plants, which should not be overlooked.

The plants mentioned have been named on the supposition that the grower has a good bay window. The floor of this should be a little higher than that of the room, with the lowest point in the centre, and a pipe to carry off waste water from washing or watering. The pipe may run outside the wall or into a pail or barrel in the cellar.

For the north or more shaded windows, the oak-leaved pelargoniums, *Aloysia citriodora*, all the finer ivies, and many of the variegated-leaved plants will do well. Plant-cases are very desirable where a window cannot be entirely given up. An excellent plan for decorating a room is to procure a pan twelve or more inches in diameter and six inches deep; place in the centre a seven or eight inch pot, then place proper drainage and soil in the pan, and plant *Lycopodium denticulatum*, or any of the varieties of *tradescantia*, which will cover the surface and hang over the sides. In the pot in the centre put a plant of *Coprosma Baueriana*, dracæna, palm, or any which suits your fancy, and place the whole in a stand just large enough to hold it and set opposite the window, and with one or two brackets on each side of the window for such plants as you may choose, you have it decorated with very little trouble. A few cut flowers may be placed in the pan, and will last a long time. The vines will completely hide both pot and pan, and the centre plant can be changed whenever desired without breaking up the arrangement. If more than one is used in a room they should not be alike.

In potting, give plenty of drainage, and cover with a little moss or rough material to prevent it from getting clogged up. For if the surplus water does not pass off, the soil will become sour, the roots rot, and the plants die. For the plants recommended, a compost of one-third leaf mould and two-thirds of good turfy loam, with a little sharp sand, will answer well, adding a little fine manure for geraniums and other soft-wooded plants, and for the bulbs, especially the hyacinths, a liberal supply of well-decomposed cow manure.

APPLES IN ENGLAND AND AMERICA.

In relation to apples and popular varieties, Mr. Josiah Hoopes, a well known Pennsylvania

authority, communicates the following to the New York *Tribune*. So thorough a competitive test was never before attempted as at the English Apple Convention of last autumn. It resulted in teaching our trans-Atlantic brethren at least one good lesson, and we may profit by it as well. Of the 1,545 varieties on exhibition, two were better than all the rest. To arrive at this conclusion each exhibitor was invited to name the best varieties of his district, for dessert as well as cooking, "so the whole of Great Britain was polled," and the result was: King of the Pippins headed the list for dessert, and Lord Suffield for culinary uses. The report is noticeable for the absence of American varieties, showing the importance of each country, and of each section as well, depending upon its own native kinds for a supply of fruit. No better evidence is needed of the truth of this than the fact that the King of the Pippins, mentioned above as the best dessert apple for England, is with us a very acid, poor fruit, unworthy of cultivation. The Ribstone Pippin, which I presumed was the standard for quality in English apples, comes third on the list, and is a fine fruit with us, although inferior to many of our own excellent varieties. The greater portion of the specimens on exhibition were taken from the dwarf bush and pyramid trees but a few years old, and very few from large standards such as are popular with us. The London Gardeners' Chronicle said to English readers: "Unless we are favored by warmer and drier seasons than the average of the last eight years, home-grown apples—whatever enthusiasts may say of our notions as patriots—will hardly be found profitable." With Americans abundance of good apples is indispensable, and happily we have to spare for foreign friends less favored. Visiting a few years ago, a noted garden within a short distance of Edinburgh, I was informed that "hundreds of people in the vicinity had doubtless never tasted an apple," and, judging from the care and expense bestowed upon the few trees I saw, the assertion could readily be believed.

THE VARIETIES OF THE COCKSCOMB.

Probably but few who admire the large, velvety, dark-crimson crests of the cockscomb, are aware that these are due to a malformation which has become fixed by cultivation. These combs or crests are sometimes of enormous size: some even have measured eighteen inches across. They show no distinct flowers. It not rarely happens that the parts of a plant, that are usually distinct and separate, grow together; it is not rare to find twin cucumbers, formed by two which are united for their whole length. This union often takes place with stems. Squash vines are sometimes found grown together for some distance, and a similar growth is often seen in the asparagus. The Cockscomb, *Celosia cristata*, is an annual, a native of the East Indies, and in its normal state produces numerous erect branches, terminated in time by long spikes of flowers. The numerous flowers themselves are small, and not at all showy, but each has at its base several bracts, or floral leaves, which are highly colored. These are usually dark-crimson, but there are white, yellow, and rose-colored varieties. In the form cultivated as cockscomb, the stems and branches are united and soldered together, as it were, into a confused mass, which is sometimes very wavy on the top. In the branching form, only the flowers on the lower portions of the branches are fertile; accordingly those on the lower parts of the crest only, produce seeds. The velvety texture of the crest is caused by the ends of the numerous bracts that appear at the surface. Though these crests are monstrosities, the peculiarity is well fixed. This is one of the oldest of garden plants, having been cultivated in English gardens for over three hundred years. The variety known as Japanese, is peculiarly rich in color. To raise the largest crests, and of the most brilliant color, the soil must be excessively rich. The finest and largest specimens are produced by growing the plants in pots, and shifting them into larger pots as they need it.

SETTING OUT CurrANT BUSHES.

The most important point in setting out currant bushes is to set them out. Set them where you can cultivate on each side of them, and not against the fence or wall. As often treated, currants are a nuisance. The bushes soon become stunted and covered with moss, the caterpillars destroy the leaves, and what few currants we get are small, unripe and nearly worthless. Why should they be otherwise? They are never manured, never cultivated or hoed, rarely pruned, and no efforts are made to destroy the caterpillars until half the leaves are stripped from the branches. If any of our readers have such bushes, the first thing to do is to set out new ones on new land. Let the old ones remain until the new ones come into bearing, and in the meantime give the old ones a dressing of manure, cultivate or fork and hoe the ground around them and keep down the weeds, afterwards cut out all dead branches, and all that are so far gone as to be hopeless. As a field crop, when you have access to a railroad station or near market, and can secure pickers, currants can be grown with considerable profit. But you must plant on rich land, or make it rich with manure, and keep the soil all through the growing season well cultivated and free from weeds. Were we about to set out several acres of currants, we should set them out in rows not less than six feet apart, and three feet apart in the rows. This would give twenty-four hundred and twenty bushes per acre. Seven or eight feet apart would be better. The most popular red variety is the Cherry. This is owing to its large size and handsome appearance. But with us it is not as productive as the common Red Dutch, or Victoria. The Versailles is also a productive and good currant of large size. Size, however, is largely a question of rich land, good cultivation, and judicious pruning.—*American Agriculturist.*

THE NEW GRAPES.

Moore's Early.—This variety is a pure native. It ripened September 8th, about the same time as Massasoit, three days after the Hartford, fourteen days after the Champion, two or three days before Lady and Brighton, about two weeks before the Concord. The bunch is of medium size, moderately compact, berry large to very large, round; color, black, with a blue bloom; flesh, pulpy and of medium quality, better than Champion, but hardly equal to the Concord; vine, vigorous and hardy, but so far as we can see, only moderately productive. It is a handsome grape, and will sell well in market, although we think the Champion or Hartford to be more profitable.

Rochester.—Ellwanger and Barry's seedling is also a native, and ripened September 10th. The bunch is large, generally double shouldered, very compact, berry of medium size, dark purple; flesh melting, vinous, sweet, highly perfumed and rich. The vine is vigorous, hardy, with remarkably healthy foliage and bears heavy crops in the worst of seasons, the fruit setting well under the most adverse circumstances. The fruit must be gathered and used as soon as it is ripe, for if allowed to become too ripe, it drops. Although this grape was introduced several years ago, it is rarely found, owing to the difficulty experienced in propagating it. It is referred to here on account of its excellence, either for the garden or vineyard, and we think it deserves to be disseminated, even if its propagation be slow and expensive. One cultivator in Canada goes so far

as to say that the originators have not bestowed on it the praise to which it is justly entitled. On further trial over a wider extent of territory it may develop faults which have not been noticed here.

Lady.—A white seedling of the Concord. Bunch of medium size, moderately compact; flesh tender and pleasant, but not rich; vine vigorous, hardy and productive. It ripened September 10th, and is a valuable, early, white grape.

Eumelan.—Introduced several years ago by Dr. Grant, is almost too old a variety to be mentioned among these grapes, but its fine quality entitles it to consideration as an amateur's grape. Propagators cannot increase it profitably, hence it does not find its way into as many gardens as it should. Bunch of medium size, but variable, sometimes large, often small, somewhat loose, berry of medium size, black with a thick, blue bloom; flesh juicy, rich and superior quality. Vine moderately vigorous, hardy and yields well. It succeeds best when grafted on a strong grower, and is valuable only for the amateur who desires a fruit of the best quality. It ripened September 11th.

Brighton.—A cross of the Concord and Diana Hamburg, is another rather old sort which has done so well this year that it would seem unfair to overlook it. In point of quality it is not excelled by any grape grown in the open air, but it must be gathered and eaten as soon as it is ripe, for when permitted to remain on the vines too long it loses its flavor. The berry and bunch are large and handsome, and the vine is vigorous and productive. In some situations the foliage mildews, sometimes only slightly, and again seriously; but it generally succeeds in favorable localities under careful culture. Recently it has been planted quite extensively for market, but care should be observed in selecting a suitable location. An amateur's collection which does not include the Brighton would certainly be incomplete. It ripened September 11th, ten days before the Concord and about a week after the Hartford.

Early Victor.—Raised by John Burr, is one of the newest grapes, and therefore not very widely distributed as yet. The bunch is rather small or of medium size, and compact; the berry is of medium size, round, black, covered with bloom; flesh slightly pulpy, very sweet and pleasant, but without any vinous spirit, which to some tastes is agreeable. It ripened September 13th, five days after Moore's Early, eight days after the Hartford and eighteen days after the Champion, and only ten days before the Concord. It was supposed to be earlier than Moore's Early, but it does not prove to be so this season, and it looks as if this sort would not occupy the place destined for it, although it is a good grape in its way.

Amber Queen.—Is a variety in which I have been considerably interested on account of its superior quality, but I doubt whether it is destined to become popular, owing to a serious defect which it has of not setting its fruit well. The bunch and berry are of medium size, color a bronzed purple, overspread with bloom; flesh tender, sprightly, vinous and very rich. Vine vigorous and productive, with healthy foliage, but its leaves have a yellowish tint by which plants of this variety may be quickly and surely identified. It ripened September 13th.

Lindley.—One of Rogers' red varieties, has done so well in several localities as to be esteemed one of the best red grapes in cultivation. Like all hybrid grapes, it develops faults occasionally which are often of slight importance, but frequently serious under certain unfavorable circumstances. So far as I know, its greatest defect is that of failing to set a full crop regularly. One of its striking characteristics is its beautiful color, a bright, clear shade of red which attracts the eye to it at once, even when it is surrounded by larger and more showy grapes. Nor is it one liable to be disappointing after tasting it. Its good quality renders it a favorite immediately, and the pleasure it gives the palate is not easily forgotten. We regard it as one of the best red grapes in our vineyard, and from what we know of it, we should rank it among the standard sorts for the garden or vineyard. Strange to say, for some cause or another, this variety of the Rodgers has not been disseminated to the same extent as some others less worthy. It

ripened September 15th, a week before the Concord.

Duchess.—One of the new white grapes, is said to have been produced by crossing a white Concord seedling with Delaware or Walter. The bunch is medium to large, long, shouldered, very compact, somewhat crowded; berries of medium size, but not uniform, some being quite small; form roundish; skin thick, generally dotted with small, black spots, about the size of a pin's head; color light green at first, becoming greenish yellow when ripe; fruit almost transparent; flesh tender, without pulp, juicy, sweet, crisp, rich, and in quality it holds the highest place. Vine vigorous and productive, and the foliage that I have seen is healthy, though in some places it is said to mildew badly. Grown with care, the *Duchess* will, no doubt, prove to be a valuable white grape for the amateur, and, perhaps, in favorable localities may be cultivated successfully on a larger scale for market. It ripened September 18th, with *Rebecca*, five days before the *Concord*.—W. C. BARRY in the *Country Gentleman*.

IMPROVED STRAWBERRIES.

I thought that varieties which proved so superb on my own grounds would do as well elsewhere; but I had much to learn. There had been a rage for novelties, a disposition to think that the past would be utterly eclipsed. We should be slow in discarding old and well-tested varieties. Their apparent deterioration usually results from bad treatment and careless propagation. This tendency to part with the good qualities which once made a variety famous should be checked, and a process of higher development entered upon. I think it can be done in this simple way. I am referring to old standard kinds. For instance, take a bed of Wilson's seedling, select a plant that for some reason exhibits all the earliest and best Wilson characteristics. In every garden or field there are such plants that are head and shoulders above the others. Clear a space around such plants, and propagate from them. Repeat the process with the best children of these progenitors. We all know how well-known breeds in live stock and old varieties of vegetables are developed and improved by a careful and continued selection and propagation from the best. Apply this principle to the standard strawberries, and a new competitor must be great, indeed, to rival them. In the future, as in the past, success in the development of the strawberry will lie in the direction of our native species. We should employ the most vigorous strains of our native stock in developing new varieties, choosing hardy mothers, or pistillate varieties, like the old "Champion," instead of petting and stimulating new seedlings, I should put them in poor, thin soil, and then discard all except those which persist in thriving under unfavourable conditions. If on sandy or gravelly soil a new variety maintains vigour and productiveness of large, fine-flavoured fruit, we should have good reason to believe that it would succeed in varied soils and climates, when sent out into the rough-and-tumble of the world.—E. P. ROE, in *American Agriculturist*.

HEATING GREENHOUSES.

Heating greenhouses with steam has been on trial for several years, but the merits of the method have been variously estimated, so as to leave some doubt in the public mind whether it, or by the more common method of the use of hot water, was the better way. At the late meeting

of the American Association of Nurserymen, Mr. Hunt, of Illinois, stated his preference for the employment of steam, though his own place is fitted out, "at a large expense," with hot water apparatus, and "it works well." In heating by steam, he says, experience has proved "that there is economy in construction, and a great economy in fuel." He gives facts and figures in two cases to support his position. In the first of these, where by some small changes nearly the same apparatus was employed for steam heating as had been previously used for hot water, the saving of fuel was thirty-three per cent. In the other, thirty-five per cent. was saved in construction, and thirty-three per cent. in fuel.—*Vick's Magazine.*

CHERRY TREES vs. CHERRY BUSHES.

During a two weeks visit among the orchardists and nurserymen of the north half of Iowa and Illinois, and the south half of Wisconsin, dead or dying cherry trees have been an ever present subject for discussion, and the pile of letters on my return has a dozen or more queries as to the cause of this general destruction, and the possibility of securing a hardier set of varieties. While this is not the time to set cherry trees, it may be well to discuss a few general principles with our tens of thousands of dead and dying trees as object lessons before our minds.

A careful inspection reveals the fact that rupture of the cells of the cambium layer of the stems is the real cause of death. In former years we have often noted cases where whole cherry orchards lived and fruited two years after fatal injury of stem by means of a narrow bridge or two of live cells growing inward from the bark and outside of the dead wood of the stem. Mr. L. A. Williams, of Mills Co., Iowa, for instance, reported his large cherry orchards healthy and full of fruit. At the next meeting of the Western Iowa Horticultural Society, he reported his trees dead or dying. A section in our wood-collection of one of these stems shows plainly that the real injury of stems occurred two years previous to his first favorable report and that two annual deposits of wood had formed over a narrow layer of live cells. This narrow bridge connecting root and top sustained life, and perfected a crop as the last expiring effort of the tree. A careful inspection of dozens of stems, now, shows that the stems were nearly or quite ruined in the winter of 1882-3, and the work was finished by the last year's crop and our past test winter.

Again we notice that young trees standing alone of the Early Richmond, Late Richmond and English Morello varieties are mainly in good condition and now making healthy growth, and we find young trees in thick clumps in still better condition. Without speculating as to leaf rust, toughening of the outer lacing of bark, etc., of older trees and stems, it is a proper time to consider the common plan of growing the cherry in Northeastern Europe, where soil and climate are much like ours. On the grounds of amateurs, peasants, and in large commercial cherry orchards, the hole is not filled up at planting, and the lower buds near the crown are encouraged to grow so that when leveled up the earth covers the bases of the limbs. By pinching the center shoots the outer whorl of branches is enabled to spread outward and upward, giving a large amount of bearing wood in bush form. As the plants attain size and age, the pruning is on the renewal plan; that is, the old stems are taken out and the young growth is encouraged to fill the vacant space. Possibly this plan may not please those who have a mania for high stems, yet it will win its way if carefully and systematically tried. Practically the same idea is involved in the cordon training of the cherry in Silesia, Poland and South Russia, on all well managed estates. The plants are started bush fashion, and the shoots are trained diagonally or horizontally on wire or pole trellis *towards the South*. The evident purpose is to screen the main branches, from the direct rays of the noonday sun, and to permit the removal of older branches, very much after our

manner of growing the grape on wire trellises. Long experience has proved that regular crops and long lived plants can be secured by the low bush system, or the low cordon training, in sections where isolated trees with even low stems are short lived and uncertain in fruitage. Theory and practise seem to favor the adoption of this Eastern plan of growing the cherry, even if we get hardier and better varieties.—PROF. J. L. BUDD, in *Prairie Farmer*.

THE LUTOOKA CHERRY.

The recent almost complete failure of all West Europe varieties of the cherry westward of Lake Michigan, and over large areas farther East and North, makes it specially desirable to experiment with the fine varieties of East Europe, where the conditions of soil and air are more like ours.

Of the varieties in our collection, the one known in Poland and Silesia as Lutooka seems specially promising. I first saw it loaded with fine fruit on the estates near Warsaw. Later I found it hardy and profitable on varied soils in North Silesia and in South Russia as far East as Kiev. The fruit is large, with small, oval pit pointed at both ends. The color is dark-red when ripe, but in the sun, a yellow expression is given by the yellow flesh showing through the transparent skin. Flesh firm, tender, juicy, mildly sub-acid. Dr. E. Jankowski, the eminent Polish pomologist, gives this variety two stars for dessert use, and a like number for the kitchen.

In leaf, bud, and habit of growth it does not seem to be closely related to any of the varieties described by Leroy, Lucas, Lauche, or other authorities of West Europe. On the other hand, it closely resembles in habit and fruit the Besarabian, and our numbers 23 and 25 imported from Orel in Central Russia, which varieties I was told by Dr. Fischer came originally from Central Asia. The leaves are peculiarly large, thick, and firm. The last two Summers have been peculiarly favorable for fungus growths upon the leaf of the cherry; yet this variety has escaped damage except a slight show of surface mildew on some of the young leaves. As this does not penetrate the tissue, it seems to do no harm.

As to hardiness of tree, I can only say, as yet, that its young wood and stem were bright and perfect last Spring after the severe test Winter which killed our Richmonds of all ages. It has grown from the terminal points with such luxuriance that the shoots are assuming a pendent habit, which seems common to about all the varieties of the cherries of the East.—PROF. J. L. BUDD, in *Rural New Yorker*.

THE MARLBORO' RASPBERRY.

The Hon. M. P. Wilder, President of the American Pomological Society, writing to the *Rural New Yorker*, says: "I am anxious to see what you have to say about the Marlboro' Raspberry. We gathered some berries on the 4th, and the bushes are now at their best. The great number of big suckers, four to six feet in height, detract from the size and earliness of the fruit. It is the earliest I have, and if the suckers had been treated as weeds, I have no doubt that the size, earliness and quantity of fruit would have been much increased. I have never seen a raspberry of such robust growth and productiveness of annual plants before, most of which must be destroyed if you wish for a crop of fruit. It is perfectly hardy, canes eight feet in length not injured at all. The Souchetii,

or White Transparent, is now coming in; if you have it not, I should be glad to send you plants. I would not part with it."

APPLE ORCHARDS.

"The Apple is our staple fruit in Western New York, and after three years of failure of the crop the prices have been somewhat discouraging. It must be said, however, that a large portion of our Apple crop was not up to the usual standard of excellence, very much not fit to go into market as first-class fruit. The main cause of this was that the trees were heavily loaded and poorly fed. We have good orchardists in Western New York, and many of them, but I must say, and I say it from actual observation, that a large number of our orchards are in a very low state of cultivation, neither creditable nor profitable to the owners.

"Without attempting any details of orchard culture, I would say that to make orchards productive and profitable, the fertility of the soil must be maintained by the use of suitable fertilizers, so that the trees will make a vigorous annual growth. Judicious pruning must be given, and insect enemies kept in subjection. Then when the fruits are grown and well grown, they must have proper care in gathering, assorting, packing and marketing. All these require skill and watchfulness at every step. Orcharding, even in our favored section, cannot be made profitable without thoroughness in every detail. The best method of preventing the ravages of the codlin moth is still a matter of anxious inquiry and experiment. The efficacy of Paris-green and other poisons, as well as the propriety of using them, are still open questions, and can only be answered satisfactorily by careful experiment. Thus far I think experience favors the use of Paris-green, when used with judgment and care."—*Address of P. BARRY, before the W. N. Y. Hort. Society, in Vick's Magazine.*

THE THRIP.—Mr. Cockburn said the thrip may be killed by spraying with a solution of one pound of sulphur and four of unslaked lime in a barrel of water. The thrip infests the Delaware more than any other grape; hence he would separate the Delaware from others. He suggested the running of all vines in one direction, so they may be laid down more easily for winter protection.
—*Michigan Farmer.*

AN ODD BIT ABOUT TREES.

THE TREE PUZZLE, WITH ANSWERS APPENDED.

The "tree puzzle" that follows is one of the most ingenious trifles of the kind now current:

1. What's the social tree,
2. And the dancing tree,
3. And the tree that is nearest the sea?
4. The dandiest tree,
5. And the kissable tree,
6. And the tree where ships may be?

1. What's the ten-tare tree,
2. And the traitor's tree,
3. And the tree that's the warmest clad?
4. The languishing tree,
5. The chronologist's tree,
6. And the tree that makes one sad?
7. What's the emulous tree,
8. The industrious tree,
9. And the tree that will never stand still?
10. The unhealthiest tree,
11. The Egyptian-plague tree,
12. And the tree neither up nor down hill?
13. The contemptible tree,
14. The most yielding tree,
15. And the tree that bears a curse?
16. The reddish brown tree,
17. The reddish blue tree,
18. And the tree like an Irish nurse?
19. What is the tree
That makes each townsman flee?
20. And what round itself doth twine?
21. What's the housewife's tree,
22. And the fisherman's tree;
23. What by cockneys is turned into wine?
24. What's the tree that got up,
25. And the tree that was lazy,
26. And the tree that guides ships to go forth?
27. The tree that's immortal,
28. The trees that are not,
29. And the tree whose wood faces the north?
30. The tree in a bottle,
31. The tree in a fog,
32. And what each must become ere he's old?
33. The tree of the people,
34. The traveler's tree,
35. And the sad tree when school-masters hold?
36. What's the tree that has passed through the fiery heat,
37. That half-given to doctors when ill?
38. The tree that we offer to friends when we meet,
39. And the tree we may use as a quill?
40. What's the tree that in death will benight you?
41. And the tree that your wants will supply?
42. And the tree that to travel invites you,

49. And the tree that forbids you to die?

ANSWERS.

- | | |
|--------------------|------------------------|
| 1. { Pear | 24. Honeysuckle |
| { Ten | 25. Citron |
| 2. Hop | 26. Woodbine |
| 3. Beech | 27. Broom |
| 4. Spruce | 28. Basswood |
| 5. { Tulip | 29. Vine |
| { Yew | 30. Rose |
| 6. Bay | 31. { Satinwood |
| 7. Peach | { Aloe |
| 8. Judas | 32. (H)elm |
| 9. Fir | 33. Arbor-vitæ |
| 10. Pine | 34. Dyewoods |
| 11. Date | 35. Southernwood |
| 12. Weeping-willow | 36. Cork |
| 13. Ivy | 37. { Smoke-tree |
| 14. Spindle-tree | { Hazel |
| 15. Caper | 38. Elder |
| 16. Sycamore | 39. Poplar |
| 17. Locust | 40. Wayfaring-tree |
| 18. Plane | 41. Birch |
| 19. Medlar | 42. Ash |
| 20. { India-rubber | 43. Coffee |
| { Sago palm | 44. Palm |
| 21. { Fig | 45. Aspen |
| { Damson | 46. Deadly night-shade |
| 22. Chestnut | 47. Breadfruit |
| 23. Lilac | 48. Orange |
| | 49. Olive |

Philadelphia Times.

THE RUSSIAN APRICOT.—Professor Budd, of the Iowa Agricultural College writes to the Prairie Farmer that it runs into many varieties, as grown from seed by the Mennonites of Nebraska. Some of them have stood the past winter fairly well; others have not. We have on our grounds varieties from Central Russia which seem perfectly hardy.

ASPARAGUS TENUISSIMUS—Nothing can exceed the feathery grace of foliage of this most beautiful of all vines for pot culture, and it grows up a string nearly as fast as Smilax. It keeps fresh so long after cutting that it is particularly desirable as a green for bouquet making. One of the most handsome and unique bridal bouquets we ever saw was composed of Nipheta Rose-buds just shadowed over with a filmy veil of the downy foliage of *Asparagus tenuissimus*. This plant grows so readily from cuttings that it will soon become plentiful.—*Am. Garden.*

THE JAMES VICK STRAWBERRY.—We have given the James Vick strawberry another trial, this time under high cultivation and under the single-plant system. Yet, the yield was anything but satisfactory. The plants were very large and thrifty, the fruit stalks numerous and well loaded, but

the berries hardly medium in size, with only few large, and many small and imperfect ones. The berry is firm and solid, good for canning, which is about all that I can say in its favor. Under the matted-row system, the James Vick has proved of no account everywhere I met with it.—*Farm and Garden.*

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

Punctuation has been maintained except where obvious printer errors occur.

Some illustrations were moved to facilitate page layout.

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