

## Technical and Bibliographic Notes / Notes techniques et bibliographiques

Canadiana.org has attempted to obtain the best copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

Canadiana.org a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

Coloured covers /  
Couverture de couleur

Covers damaged /  
Couverture endommagée

Covers restored and/or laminated /  
Couverture restaurée et/ou pelliculée

Cover title missing /  
Le titre de couverture manque

Coloured maps /  
Cartes géographiques en couleur

Coloured ink (i.e. other than blue or black) /  
Encre de couleur (i.e. autre que bleue ou noire)

Coloured plates and/or illustrations /  
Planches et/ou illustrations en couleur

Bound with other material /  
Relié avec d'autres documents

Only edition available /  
Seule édition disponible

Tight binding may cause shadows or distortion  
along interior margin / La reliure serrée peut  
causer de l'ombre ou de la distorsion le long de la  
marge intérieure.

Additional comments /  
Commentaires supplémentaires:

Continuous pagination.

Coloured pages / Pages de couleur

Pages damaged / Pages endommagées

Pages restored and/or laminated /  
Pages restaurées et/ou pelliculées

Pages discoloured, stained or foxed/  
Pages décolorées, tachetées ou piquées

Pages detached / Pages détachées

Showthrough / Transparence

Quality of print varies /  
Qualité inégale de l'impression

Includes supplementary materials /  
Comprend du matériel supplémentaire

Blank leaves added during restorations may  
appear within the text. Whenever possible, these  
have been omitted from scanning / Il se peut que  
certaines pages blanches ajoutées lors d'une  
restauration apparaissent dans le texte, mais,  
lorsque cela était possible, ces pages n'ont pas  
été numérisées.



THE CENTRAL PRISON LILY POND.

# THE CANADIAN HORTICULTURIST.

VOL. XXI.

TORONTO,

1898.

JULY.

No. 7



## RAMBLES ROUND TORONTO.



**M**ANY pleasant holiday hours may be spent in and about Toronto's parks, gardens and conservatories by the horticultural enthusiast, and if he be a lover of uncultivated nature also, he will find much beauty and charm in the rolling and picturesque country that girdles the monotonously level site of the town on all its landward sides. Turning first to the eastern suburbs, we may note as a place of interest the grounds of Leslie Bros., the pioneer nurserymen of the Province. Toronto's employment of the horse chestnut as its principal tree for avenue planting, was due to the accident that Leslie Bros. had a large stock on hand, and were willing to furnish it at a lower rate than other trees. A glimpse of Queen Street Avenue or

Sherbourne Street at the end of May, when the trees are a mass of snowy spikes, will do much to reconcile one to the arrangement, though the stately American white elm or one or two varieties of the maple such as the sugar or the silver-leaved with their pleasing symmetrical shapes and their color effects are perhaps to be preferred for ornamental street planting. Further east lie the trim trial-grounds and extensive greenhouses, for palms, cut flowers and decorative plants, of the Steele, Briggs Seed Co., and Munro Park, where the Street Railway Co. as a speculation, is building a pavilion and making other improvements? Victoria Park is beyond this again. From Munro Park, winding ways lead up the wooded Norway heights and on through a picturesque old orchard to a grand old place, little known to the general public, but interesting to us for its trees. This is Blantyre Park, and the Gothic Mansion in the centre is where Archbishop Ryan seeks the quiet and repose of country life during the heat



FIG. 1372.—A SCENE IN ROSEDALE.

of summer. The St. John's Industrial School for Boys, founded about five years ago, occupies the large brick building at the southern end of the grounds. Mr. Peter Paterson, a merchant, enthusiastic in arboriculture, used to live here, and got together a collection of trees of great variety. A broad carriage drive sweeps in from the north through the belt of evergreens that faces the road, bends like a bow and sweeps out at the south, and it is behind this drive that the bulk of the plantation, a growth of some forty-eight years, with its graceful groups and scattered specimens, of picturesque and stately trees, gives charm and majesty to the landscape.

Conforming with an old gardening

practice, a terrace with formal flower beds surrounds the house, and serves to ameliorate the contrast between the stiff artificial lines of the building, and the natural beauties of the park. In the rear of the edifice lies a pretty old-fashioned fruit-garden, with rectangular plots bordered with box, indicating the old-world tastes of its designer, and recalling perhaps, to the mind of its present occupant the scholarly prelate, that delightful description of an ideal garden depicted "in good Queen Bess' glorious days," by the pen of the illustrious Francis Bacon. Treating of this garden, Bacon says:—

"For the main garden I do not deny that there should be some fair alleys ranged on both sides with fruit-trees and

*RAMBLES ROUND TORONTO.*

some pretty tufts of fruit-trees, and arbours with seats set in some decent order."

By the way, talking of the much abused, old-fashioned formal gardens, with their quaint, but not very tasteful art of "vegetable sculpture"—trees and hedges clipped into various shapes—pyramids, vase forms and such like, and even figures of birds and animals, we must, at least, concede that they were

days." In another passage he says, "You are to frame some of the alleys for shelter, that when the wind blows sharp you may walk as in a gallery, and those alleys must be likewise hedged at both ends to keep out the wind, and those closer alleys must be finely gravelled and no grass because of going." Our modern home grounds have not the comfortable arrangements the old gardens had, nor indeed, in towns especial-



FIG. 1373.—IN THE VALLEY OF THE DON—NEAR TORONTO.

designed for use and comfort, for Bacon goes on to speak of not setting the trees too thickly, but "to leave the main garden so it be not close, but the air open and free. For as for shade I would have you rest upon the alleys of the side grounds, there to walk if you be so disposed in the heat of the year or day; but to make account, that the main garden is for the more temperate parts of the year, and in the heat, for the morning and the evening or overcast

ly, have they sufficient privacy to make their use enjoyable to their owners. The tendency seems to be more and more all the time to make the grounds merely for the wayfarer. In Buffalo, Detroit, and other American cities, this principle is carried to an extreme and one walks for miles on streets with lovely lawns and gardens, unenclosed, unused by their owners, and in effect mere boulevards.

But to return to our Toronto rambles,

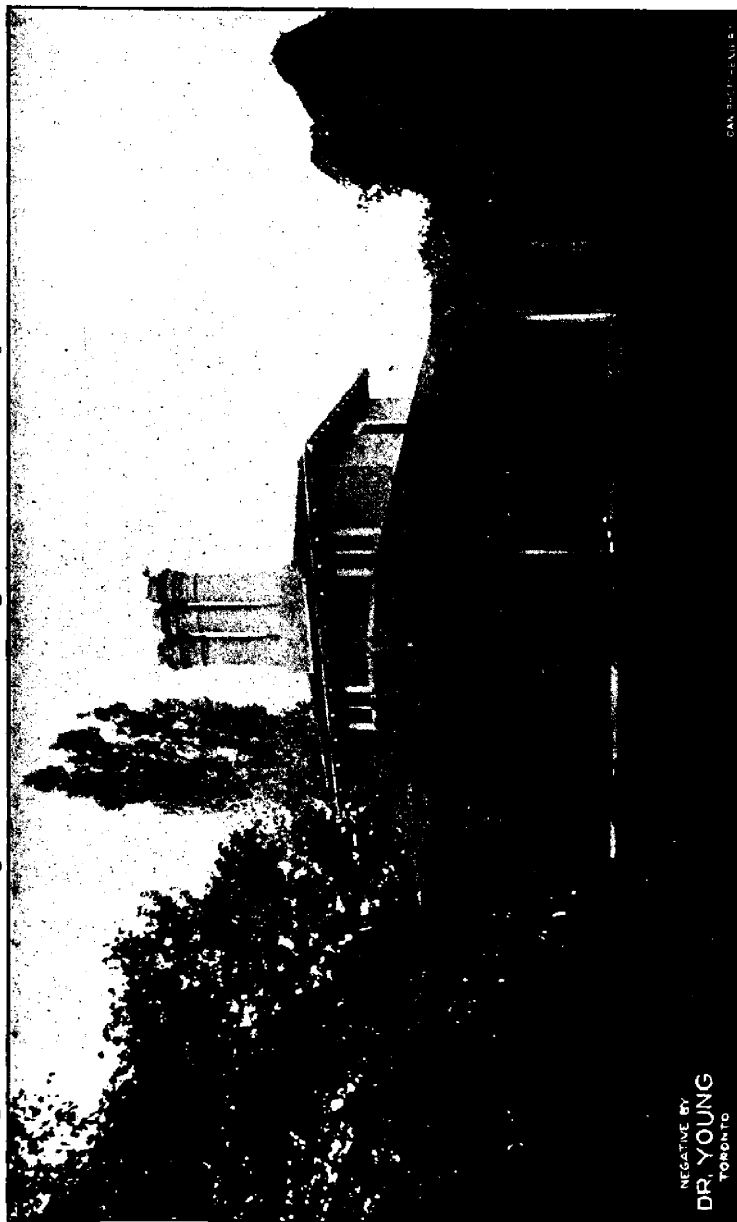


FIG. 1374.—“HOWARD HOUSE,” RESIDENCE OF THE LATE J. G. HOWARD, HIGH PARK, TORONTO.

RAMBLES ROUND TORONTO.



FIG. 1375.—ON THE HUMBER RIVER—TWILIGHT SHADOWS.

Nearer the city some beautiful vistas are to be had in the Don valley, and also in the Rosedale ravines, as shown in Fig. 1372. Fig. 1373 depicts a sylvan glade in "Brooke's bush," at Hogg's Hollow some seven miles up the Don, and four miles north of the city. Hogg's Hollow is named after a miller who was engaged in his occupation there in *Rebellion Times* of 1837, and is a lovely and picturesque spot.

From here, retracing our steps to the town, we pass by Mount Pleasant Cemetery, that tranquil, beautiful resting-place of the dead, and Reservoir Lake a crystal gem crowning the hill behind Toronto, but turn aside to observe more closely a novel floral sight. At the water-works pumping house in July and August, the pond is ablaze with water-lilies of all shades. "A feast of lilies and lily pads." The delighted eye ranges over the rainbow-like reflection on the waters, the wonderful deep blue of the Zanibar lilies, a foot

in diameter, the snowy cups of our own native lily, the deep rosy pink of another African species, also twelve inches wide, and of the very rare Cape Cod water-lily, the pink and white of the giant Egyptian lotus rearing on a stalk six feet high, and its flowers enormous—a dream of beauty. Here too, are the splendid night blooming lilies:—*Nymphæa rubra*, a native of India with "immense cups of glowing carmine" and rich brown leaves; *Nymphæa dentata* and *Nymphæa lotus*, snowy beauties from Western Africa, and "queen of them all, *Nymphæa Devonensis*, surpassing in brilliancy of flower, if not in size of leaf, the famous *Victoria Regia*." "A single plant of the *Devonensis* will in one season cover a circle twenty feet across, with leaves twenty-five inches in diameter, and flowers twelve inches from tip to tip of petals. The leaves are rich green with serrated edges and occasional brown blotches. No person can form an adequate idea

## THE CANADIAN HORTICULTURIST.

of the beauty of a red water lily until he has seen one of these gorgeous blossoms. They are rosy red (with scarlet stamens), glowing by lamplight with undescrivable color." In the ponds at the Central Prison of which our frontispiece will give a good idea, there are water lilies too, but they do not thrive so well as at the water-power works, the water not being so warm. The temperature in the pond at the latter place often rises to ninety or one hundred degrees Fahrenheit. The Central Prison gardeners can boast however of the Victoria Regia, with its leaves 6 feet in diameter, and flowers from twelve to sixteen inches across.

One of the chief sights of floral Toronto is Mr. J. H. Dunlop's establishment. He has at present eighteen greenhouses, and in a month or so when the three houses under construction are finished, he will have 110,000 square feet under glass. If the twenty-one houses were thrown into one, it would cover a space nearly a mile long and seven yards wide. There are to be seen 30,000 rose bushes, 20,000 carnations, 10,000 violets; besides rhododendrons, azaleas, hyacinths, tulips, daffodils, lilies, smilax, and the humble asparagus and mushroom. At easter tide his houses were like a beehive with their throngs of visitors.

Our last illustration is of the Humber river, which shows it at its loveliest at the close of day, the reflections in their intensity reminding us of shadow River Muskoka. The Humber was once

the great highway from the Northern Lake regions by which the Indians and the old French colonists travelled to the trading post at Toronto, the valley of the Holland river forming the northern portion of the trail. A favorite resort for the canoeist and holiday maker, it also has much interest for the botanist in its different wild growths, water lilies, cyripediums, pitcher plants and many others, and for the ornithologist in its varied bird life.

Not far from the Humber is the Howard House, the gift of the late Mr. J. G. Howard to the city. Hard by the house the monument of the donor rises enclosed on one side by a massive iron fence, which bears the inscription,

" Saint Paul's Cathedral for 160 years,  
I did enclose :

" Oh! stranger look with reverence,  
Man, Man! Unstable man,  
It was thou who caused the severance."

Curious relic of the past, it was part of the original railing round St. Paul's, London, England, and on the way across the sea went to the bottom with the vessel that was carrying it. Heavy and cumbrous as it was, it was yet recovered and forwarded to its destination. A sweet wild garden surrounds the house, where as we write :

" Fair handed Spring unbosoms every grace,  
Throws out the snow-drop and the crocus first,  
The daisy, primrose, violet darkly blue,  
And polyanthus of unnumbered dyes."

And here we end our rambles, realising that "the speech of flowers exceeds all powers of speech."

A. E. MICKLE.

*Maplehurst, Grimshy.*





## SAUNDERS' SEEDLING BLACK CURRANTS.

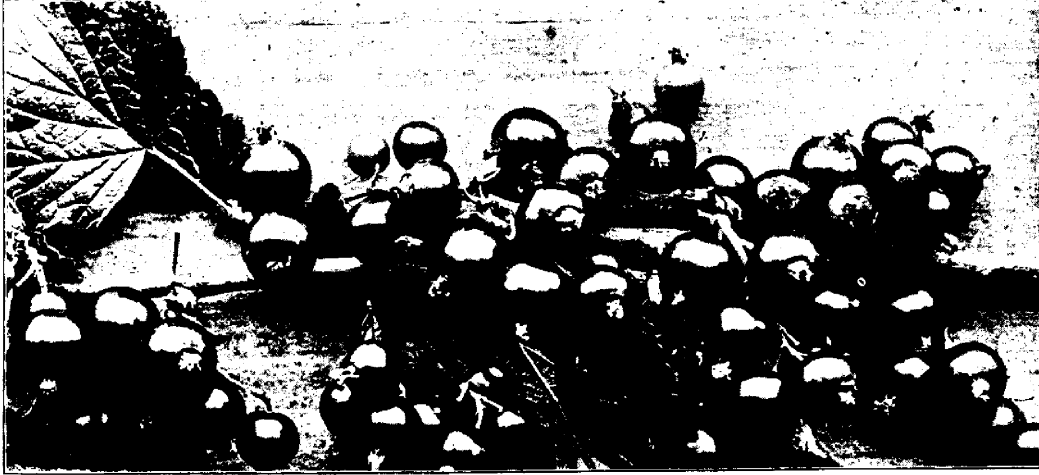


FIG. 1376—SAUNDERS' No. 12, PHOTO 1896.

**A**MONG a collection of seedling black currants sent to Maplehurst by Dr. Saunders, of Ottawa, in 1896, we have taken special notice of one which gives promise of greater productiveness than any of the others.

Not only are the berries a good size, but what is of greater importance with a black currant, the branches are full and hang pretty closely along the branch. If this number continues its good qualities in 1898, we shall pro-

pagate it as being of sufficient importance to be distributed among the members of our Association.

Black currants have, it is true, a rather limited market in Canada, yet they bring a much higher price than red currants. In Europe there is a good demand for them, and being good shippers, no doubt we could easily place them on the British market. The great point is to get a productive variety, and this we are inclined to believe will be found in Saunders' No. 12.

### THE CURRANT APHIS, (*Myzus ribis*).

**C**OMPLAINTS have been received from Orillia that some species of louse was very injurious to the black currant bushes in that vicinity. No doubt it is the currant aphis, which is especially injurious to the red currant, but which

also attacks the black currant. The first evidence of their presence is the red bladder-like galls on the leaves, which when badly infested become greatly distorted and curled. As a result these leaves drop from the bushes and the fruit ripens prematurely. This

species of aphid is of European origin. The winter eggs hatch early in spring, and the galls which are caused by the young insects usually contain one female with three or four young. The males do not appear until late in the summer.

Fortunately there are natural enemies, such as larvae of ladybird beetles, of syrphid flies, and some parasites.

Of the remedies that may be employed for these and other species of aphid, we may mention as very effectual a strong solution of whale oil soap, 1 lb. to 7 gallons of water, two applications

(1) about first of June and (2) about the middle.

Kerosene emulsion is also effectual. In some instances we have used pure kerosene emulsion, where we could apply an exceedingly fine spray; but otherwise it is injurious to the plant life.

For success in overcoming the aphid, it is very important to begin early, just as soon as the first few lice are observed. If the leaves are badly curled before spraying is begun, it is well to first clip off the badly infested portions of the branches, and then spray thoroughly.

---

## THE LEAF CURL.

ACCORDING to Bulletin 92, Ohio, it is shown that the leaf curl flourishes under conditions of low temperature and abundant rainfall for April and May, especially if these conditions follow a season of excessive leaf curl. Two such seasons following each other have just been experienced, and there is widespread complaint of the curling, coloring and falling of the leaves affected with the fungus. It has also been noted that the leaf curl prevails to a greater extent upon several fine varieties, including Elberta, Oldmixon, Mountain Rose, Globe, the Crawfords, Red Cheek, Chair's Choice and some others, while Salway, Smock, Wheeler and some others are much less susceptible, though somewhat injured at times. Trees badly attacked by curl are liable to drop much or all of the fruit.

It has been shown by many tests

that Bordeaux mixture is a profitable fungicide for scab, pustular spot and leaf curl, the stronger mixture being used for the application before blossoming, while half the strength can be used to good advantage after the leaves are out. The first spraying for leaf curl, to be effective, must be made as the buds are swelling and just before the blossoms open, followed by another after blooming. These two sprayings in 1897 reduced the proportion of curled leaves (diseased) from 88 per cent on unsprayed to 41 per cent on sprayed, a difference believed to be sufficient to hold the crop of fruit. The results are even more striking when unsprayed trees were compared with those treated two years in succession. In 1897 such had but 7 to 8 per cent of curled leaves while the unsprayed for the same time had 88 per cent curl.

## HOW TO RAISE TOMATOES.

If good crops of any kind are to be secured, begin with the plow. If you have only two days in which to prepare your ground and put in a crop of tomatoes, by all means use a day and a half in preparing the soil. Make it fine, pulverize it. Keep the harrow going as long as your conscience will let you, and then harrow some more. If the dirt is lumpy, roll it, then harrow, and just before setting out the plants go over the land with a weeder—one of the most valuable machines yet invented. It leaves the land smooth and fine. Of course in a garden the hand rake answers the same purpose as the weeder.

If stable manure is to be used on the tomato field let it be thoroughly rotted. Do not, under any circumstances, use coarse green manure. I would prefer none at all. Whenever stable manure is used, it should be plowed under in the fall. It is the practice of a great many people to dig a hole and put in a shovelful or two of stable manure, throw on a little dirt and set the plant on top of it. If a rank growth of vine and a lot of green tomatoes are wanted, this method will be sure to give perfect satisfaction. I experimented with many kinds of fertilizers for tomatoes, and am still experimenting, but up to the present time and with my present knowledge of the matter, know of nothing that will give as satisfactory results as the following, which has produced, so far as can be learned, the largest crop

of ripe tomatoes ever grown. After the plants were set, a good handful of Bradley's complete potato manure was scattered well about the plant, being careful that it did not touch either leaf or stalk, then about a tablespoonful of nitrate of soda and a good large handful of hard wood ashes were scattered about each plant, and the weeder run over the field. This thoroughly rakes in the fertilizer. The same dose was repeated just after the fruit began to set. This treatment gave not an excessive growth of vine, but the largest crop of ripe tomatoes ever grown, or at least the largest I have ever heard of. It gave me ripe tomatoes by the bushel in 49 days from the time the plants were set in the ground, the variety being the New Imperial. These plants were given clean culture and were not trimmed or raked up in any manner.

I can not recommend too highly the use of nitrate of soda in growing tomatoes, especially where early ripening is desired. When used at the rate of 150 to 175 lbs. per acre, and in connection with wood ashes the total yield of early tomatoes will be very largely increased. A larger quantity of nitrate will increase the yield of fruit, but at the expense of the net profit on the crop. However, great care must be exercised in the application of nitrate of soda to any plants, and especially to the tomato. It should not come in direct contact with either the stalk or roots.—Amer. Agriculturist.



## THINNING FRUIT.



FIG. 1377. Effect of thinning on the size of native plums (after Wisconsin Station).

**N**OW that we are making some definite practical tests at Maplehurst, of the possible advantage of thinning fruit, it is interesting to find confirmatory testimony coming from other sources. Farmers' Bulletin (U. S.), 76, says: Thinning the fruit of trees that have a tendency to overbear, is recommended very generally, and practiced very little. Few extended experiments in thinning fruits have been reported by Experiment

Stations, but where thinning has been followed systematically for a number of years in commercial orchards, it has been found profitable.

The number of fruits produced per tree may be regulated in two general ways: By pruning away a part of the branches to prevent the formation of too much fruit, or by picking off the superfluous fruits soon after they have formed. With such fruits as grapes, raspberries, blackberries and the like, the former

## THINNING FRUIT.

method is employed almost exclusively.

Among orchard fruits perhaps none need thinning as much as Japanese plums, except peaches which, in commercial orchards, are thinned more systematically than any other fruits. It is reported that in favorable years the fruits of Japanese plums set so thick as to hide the limbs. In fact, the tendency to overbear is considered by some to be one of their greatest faults. Thinning the fruits of these plums has been favorably reported on by the Alabama College Station. The size of the fruit was increased noticeably by thinning.

The tendency to overbear is also seen in case of some varieties of native plums, as is shown by an experiment with the Gale seedling plum at Wisconsin Station. About four-fifths of the fruit was removed from a portion of a tree, leaving the fruits about 2 inches apart on the branches. The fruits on this portion of the tree were considerably larger than on the unthinned portion, as is shown in the illustration (Fig. 1377.)

The Massachusetts Hatch Station has reported the results of an experiment with apples and plums. A tree each of Gravenstein and Tetofsky apples was thinned on July 1, and a similar tree of each variety left unthinned as a check. In case of the Gravenstein the yield on the thinned and unthinned trees, respectively, was first quality fruit, 9 bushels and  $2\frac{1}{2}$  bushels; second quality fruit, 1 bushel and  $2\frac{1}{2}$  bushels; windfalls,  $9\frac{1}{2}$  bushels and  $10\frac{1}{2}$  bushels. In case of the Tetofsky the thinned trees gave 1 bushel of windfalls, and the unthinned tree 3 bushels; of second quality fruit the yield was one-half bushel from each tree; and of first quality fruit the thinned tree yielded 2 bushels and the unthinned tree none at all. Allowing 60 cents per bushel for firsts and 25 cents per bushel for seconds,

the market value of the thinned Gravenstein apples was over twice as much as that of the unthinned, and of the thinned Tetofsky apples eleven times as much as that of the unthinned. It cost 48 cents to thin the Gravenstein and 25 cents to thin the Tetofsky. The net gain due to thinning was 85 cents for the Tetofsky and \$1.85 for the Gravenstein. It is thought that the results would have been more pronounced if the thinning had been done two weeks earlier. The large percentage of windfalls in case of the Tetofsky was believed to be largely due to the fact that the apples have very short stems and are borne in clusters of from three to eight fruits each, so that as they grow they become very much crowded. With trees having this characteristic, therefore, thinning is especially valuable.

The results with plums were similar to those with apples as regards the increased production of fruit. A tree each of Guei and Victoria plums was divided into approximately equal halves, one half being thinned and the other half left as a check. The thinned half of the Guei tree yielded 9 quarts of marketable fruit and the unthinned half  $5\frac{1}{2}$  quarts. The yield of marketable fruit from the thinned and unthinned halves of the Victoria tree was 16 quarts and  $9\frac{1}{2}$  quarts, respectively. The value of the fruit was taken to be 9 cents per quart, and the cost of thinning 12 cents for the Guei and 18 cents for the Victoria, giving a net gain due to thinning of 20 cents and 41 cents, respectively.

The advantages claimed for thinning orchard fruits are about as follows:— Thinning increases the size of the fruit, gives it more color, and a better flavor. It diminishes the amount of worthless fruit, windfalls, etc., increases the amount of No. 1 fruit, and in some cases increases the total yield.

Thinning should be delayed until there is no further danger of premature dropping of fruit from lack of pollination, the effect of frosts, or other accidental causes. It should be done, however, before the fruit becomes so large as to tax the tree. The usual recommendations are to thin plums when about half grown and before the pits harden ; peaches when the size of small

hickory nuts or when half an inch in diameter ; apples when the size of hickory nuts to  $1\frac{1}{2}$  inches in diameter. The amount of fruit removed will depend largely on the previous pruning, and on the age, size, and variety of the tree. The fruits should be left far enough apart so as not to touch each other, and it is often recommended to leave them from 4 to 6 inches apart.

## JELLIES AND PRESERVES.

CONSIDERING the expense and risk of exporting fresh fruits it really seems as if our grocers might do more in the way of evaporated fruits, jellies and preserves. The bulk would be so much lessened by the evaporation of the water, or by reducing to jelly that the expense of transportation would be much reduced, while the risk would be almost none. Of course science and skill is necessary to do the work properly, faces us on the start, but if our farmers are being taught dairying and cheesemaking at the expense of the Department, why should they not also be taught jelly making. The following is from the *American Agriculturist*.

A profitable way of converting some of the surplus fruit on the farm into a salable product lies along the line of jelly making. The great mass of city residents are forced to buy commercial jellies that in many cases are of inferior quality if not positively injurious to

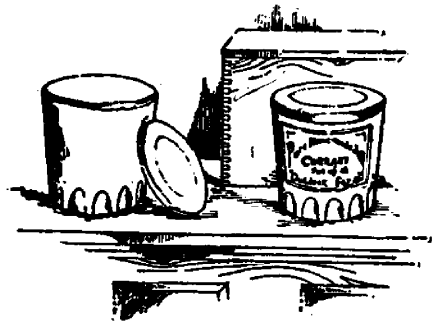


FIG. 1378.—JELLY JARS

health. Thousands that now go without rather than buy the questionable compounds shown in stores, would be glad to patronize a brand of pure "farm-raised" jellies, put up in attractive shape and bearing the imprint of the maker, as a guarantee of excellence. Make the very best article possible ; put it up in the most attractive style, and no inconsiderable income can be derived from fruit that is now often practically wasted. Such products are taken in many instances by women's exchanges.

# ONTARIO FRUIT CROP REPORT.

PREPARED BY ONTARIO FRUIT GROWERS' ASSOCIATION.

Scale, Very Good, Good, Poor, Very Poor.

	Apples.	Pears.	Peaches.	Plums.	Cherries.	Quinces.	Apricots.	Grapes.	RCurrants.	Blkberry.	Raspberri's.
Essex, Kent and Lambton—A. McNeil	Poor	Very good.	Good.	Very good						Very good.	Very good.
Middlesex and Perth.—T. H. Race	Good	Good.		Very good.	Very good.				Good		Very good.
Wellington, Waterloo and Wentworth—M. Pettit.	Good	Poor	Poor	Good.					Good	Good	good.
Burlington District—A. W. Peart	Good	Poor	Very poor.	Poor		Poor.	Poor	Good	Poor	Verg good.	good
Durham, Northumberland and Peterborough—T. Beall.	Very good	Very good.		Very good				Poor	Very good.		
Lennox, Addington and Hastings—Geo. Nicol.	Poor to good			Very good.							
Prince Edward Co.—W. H. Dempsey	Very poor.	Poor		Good.	Good.				Good	Good	
Grey—J. G. Mitchell, Clarksburg	Good.	Good.		Good.	Good.						Good.
Huron—A. E. Sherrington.	Poor.	Good.		Very good	Very good				Poor		
Walkerton	Poor	Good.		Good.							
Grenville—Harold Jones, Maitland	Poor	Good.		Good.					Very good		
Wentworth—W. M. Orr, Fruitland.	Good	Good.	Poor to good	Good.	Good.			Good	Very good	Very good.	Very good
Ontario—R. L. Huggard	Poor	Very good	Very good	Good.	Good.				Poor		
Whitby.											

## NOTES ON CROP REPORT.

Our early hopes of an extraordinary yield of fine fruit has been sadly disappointed during this decisive month of June. The great staple of Ontario, the apple, which forms so important a part of our export trade, at first promised to be superb, but many varieties did not set well, especially Red Astracan and Greening. Then, came the scab, which even in spite of Bordeaux mixture, three times applied, is very severe, especially on the sheltered side of each apple. So serious is the sudden outbreak of this fungus, now, in the middle of June, that the Department of Agriculture has issued a warning circular, urging the importance of continued spraying. Our reports (see table) show a fairly good crop, but we fear the scab has not been sufficiently considered, or else the scab is less severe elsewhere than in the Niagara district.

Bartlett pears promise a clean, fine sample, though not a very heavy crop, while plums promise quite a good yield.

The following are brief notes from our directors and others:—

A. McNeill, Windsor,

"Peaches. Good, notwithstanding the leaf cure."

"Plums. Very good, although some varieties were somewhat injured by aphid. A number of large orchards in the neighborhood of Belle River had the fruit completely destroyed by hail on the 11th inst."

Mr. W. W. Hillborn, Leamington,

"I think there will be a good crop of peaches, say three-fourths of an average. A number of varieties are very heavy laden. We have been thinking peaches for the last ten days, Crawford type, are very poor."

Mr. T. H. Race, Mitchell,

"Fruit promises more than an average crop in Perth and Middlesex counties. Apples are good, plums extra good, pears good, though not what the blossom promised."

Mr. Thos. Beall, Lindsay,

"I should add respecting pears, that during the last two or three days scab is showing on the Flemish Beauty very badly, even where the trees have already received their third 'spraying' with Bordeaux Mixture. This is occasioned, no doubt, by the unusually warm wet weather during the past week."

Mr. W. H. Dempsey, Trenton.

"Insects have been more than usually numerous, stripping many orchards where not sprayed. This has been the means of compelling

many to commence spraying that would not have done so, only on seeing the orchard being stripped of foliage. Fungus has also got a very strong hold this spring early, on foliage as well as fruit."

W. M. Orr, Fruitland,

"Apples scabbing and damaged by a green fruit worm eating to the centre of the young fruit. Peaches too, affected with curl leaf, some probably permanently damaged."

Harold Jones, Maitland,

"Spot is growing on young fruit and will probably make crop of poor quality. Green apple worm has done some damage to plum trees and ruined the black currant crop. Tent caterpillars and bud moth have been very bad, in many cases stripping the trees of all foliage in unsprayed orchards. Spraying is not generally practiced, not over 10 per cent. of the orchards are sprayed in this district."

R. B. Whyte, Ottawa.

"Strawberries have been in many places very poor after blooming time, the weather was cold and dry and fertilization was bad.

Raspberries look very well and will be a good crop. Gooseberries ditto. Currants, red and white dropped the end berries in the bunch more than usual, will be only a fair crop.

Grapes promise well. Apples will be an average. Cherries more than an average.

Plums are going to be the heaviest crop on record in this district. I never saw my trees so loaded with fruit, many of them have far more than they can carry. Gueli Fonto Seedling, Glass Seedling, Moore's Artic, and about 10 or 13 P. domestica Seedlings that I have are all loaded with fruit. The aphid has been pretty bad on plum trees, but no great harm has been done yet."

E. C. Beman Newcastle,

"In reply to your request for report on fruit prospects in this section, after careful investigation from present indication would report as follows:

"Apples poor, spy almost a complete failure, the cigar shaped case borer has injured many orchards.

"Pears. On the whole good. Plums, poor. Cherries good.

"Grapes. Not many grown, but good. Small fruits are all very good, especially Strawberries, which are extra fine in quality and quantity. All fruit trees made a fine show of blossom in the spring, but many kinds did not set well. Trees blossomed too early, followed by cold weather."



## THE SPRUCE GALL-LOUSE—(*Chermes abietis*.)

*Prepared for the Bureau of Forestry by Wm. Brodie, Toronto.*

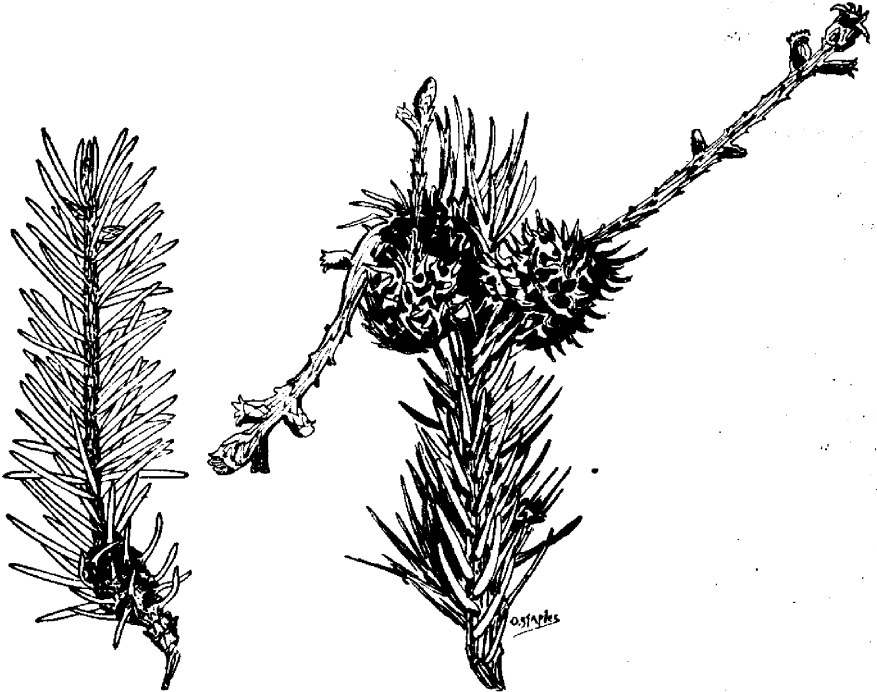


FIG. 1379.—Gall infested twig as seen in fall.

FIG. 1380.—Infested twig of European Spruce, found in Toronto, April, 1898.

IN the spring of 1897 many spruce trees in and around Toronto were found to be more or less injured by a pseudo-gall insect. The galls were enlarged and deformed buds of the pre-

vious year, usually towards the tips of the twigs. Investigation showed that these galls were formed by a small insect popularly called the spruce gall-louse, the *Chermes abietis* of entomolo-

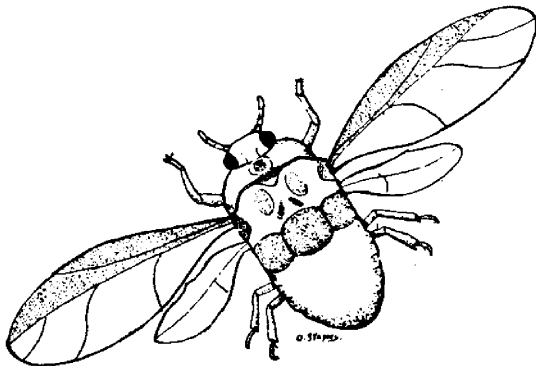


FIG. 1381.—Mature gall louse, magnified 25 diameters, collected September 1st, 1897.

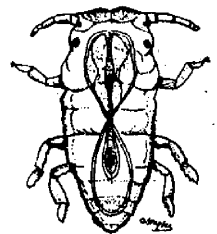


FIG. 1382.—Immature gall louse immediately after issuing from scales of gall, Aug. 18th, 1897.

gists. A short account of this destructive pest, as then known in Ontario, appeared in the annual report of the Clerk of Forestry for the Province of Ontario for 1897. Since then it has spread with astonishing rapidity and has been detected at many points, from Peterborough to the county of Bruce, where it was lately detected by Dr. Hunter on native spruce trees in a swamp in the township of Culross. It has also been found on native spruces in Muskoka, near Utterson Station. So far it would appear that unless this insect is checked by some artificial means it will soon destroy our ornamental spruce trees and hedges and, extending northwards, do immense injury to our spruce forests.

The trees already attacked by this spruce gall-louse in Ontario are the European spruce, *Picea excelsa*, the double spruce or black spruce, *Picea nigra*, the white spruce, *Picea alba*, and the balsam fir, *Abies balsamea*, and it may also be found on the hemlock, *Tsuga Canadensis*. This insect is native to Northern Europe and was introduced into the United States on imported spruce trees and thence into Ontario, or it may have been introduced here direct from Europe, as for many years there has been an annual importation of young European spruce trees into Ontario.

At Toronto the full grown insects—the producers—emerge from the galls, the scales of which open to give them exit, about August 1st. On emerging they are slightly imperfect, but in one day ample wings are developed which enable them to fly long distances. After distribution the female settles on a spruce leaf and lays—under herself—about thirty-five eggs and then dies, resting on the eggs. In about a week the young six-footed larvæ are hatched. They crawl about and find immature buds into which they burrow and of

course remain quiescent during the winter. But in the following spring their presence in the bud causes it to develop into a "gall" instead of a normal twig. The lice in the galls give birth to other living lice so that about thirty individuals are found under each scale of the gall. The galls are usually irregularly spherical and often more than a half inch in diameter. When growing they are of a yellowish green color, but during the winter they assume a reddish brown tint, which they retain until the end of May, when they usually fall from the tree. This is the usual form of this gall but there is another form, not a gall, in which the injury is done in the leaf axils. As these insects in the feeding stage are within the gall, and the gall is perfectly water-tight, so that no fluid can penetrate, poisoning is out of the question, and as in the migrating larval stage, they do not eat, poison is equally useless. Of course in this larval stage soap emulsions might be of some use if applied abundantly at the proper time. But without any doubt the cheapest and best plan as yet tried in Ontario is to *clip off the galls as soon as they are noticed*—say in June—and *always before the first of August*, while the producers are in the galls, and *immediately burn them up*. When a tree is too much infested to be dealt with in this way it should be cut down and burnt at once. Of course there is no use in doing this after the producers are out of the galls. Several cases are known where this plan was carried out with very satisfactory results, and it is respectfully recommended that all those having spruce trees in charge should carefully see to the clearing of their trees and the extermination of this formidable insect pest. As some of our nurseries are affected, buyers of evergreen nursery stock should be very careful to see that the young trees are perfectly free from this insect pest.



## Flower Garden and Lawn. ❀

### KERRIA JAPONICA.



FIG. 1383.—KERRIA JAPONICA.

**F**OR many years this shrub has been grown in the Niagara District, under the name of Japonica, or by some, of Yellow Rose. Neglected, as it often is, the bloom is sparse, and the bush straggling, but recently we have noticed a bush of surprising beauty. It is situated on the north side of the mountain at Grimsby partially sheltered by trees; the soil is moist clay, well drained by a natur-

al slope, and here it grows to great perfection. The bush has grown to a great size, it is full and symmetrical in habit, and on the 2nd of June it was loaded heavily with its golden bloom. Indeed it was a most showy ornamental, worthy a place in any garden, or lawn. We have not seen it outside this district in Ontario, and for those who give their plants only neglect, we do not advise the *Kerria Japonica*, but for the careful cultivator, who will give good care, and good soil, there is no finer ornamental to be found.

The genus name, *Kerria*, is after M. Kerr, formerly Supt. of the Botanical Garden at Ceylon. The only species known to cultivation is *K. Japonica* (Japanese), so-called because introduced from Japan in 1700. There are two forms, the single and the double flowered, the latter being the form usually seen, but the former is the more graceful and the more continuously in bloom. The accompanying photograph shows a branch of the double form, from the bush above mentioned, and will enable any reader to identify the plant. The flowers are orange yellow, solitary and terminal; the leaves are alternate, ovate-lanceolate, serrated; height of bush, 4 to 6 feet.

In addition to these forms there is a sort with variegated leaves, but all are of the same species.

## THE TULIP TREE

**A**DORNING nearly every gentleman's park in Europe, wherever the soil and climate prove congenial to it, the tulip tree is nevertheless but little known in this its native land. It is a pity, that found throughout the Western Peninsula of Ontario, more especially in the South-western counties, where it was quite abundant, and in the thick forest that then existed west of St. Thomas. It did not, however, make its habitat

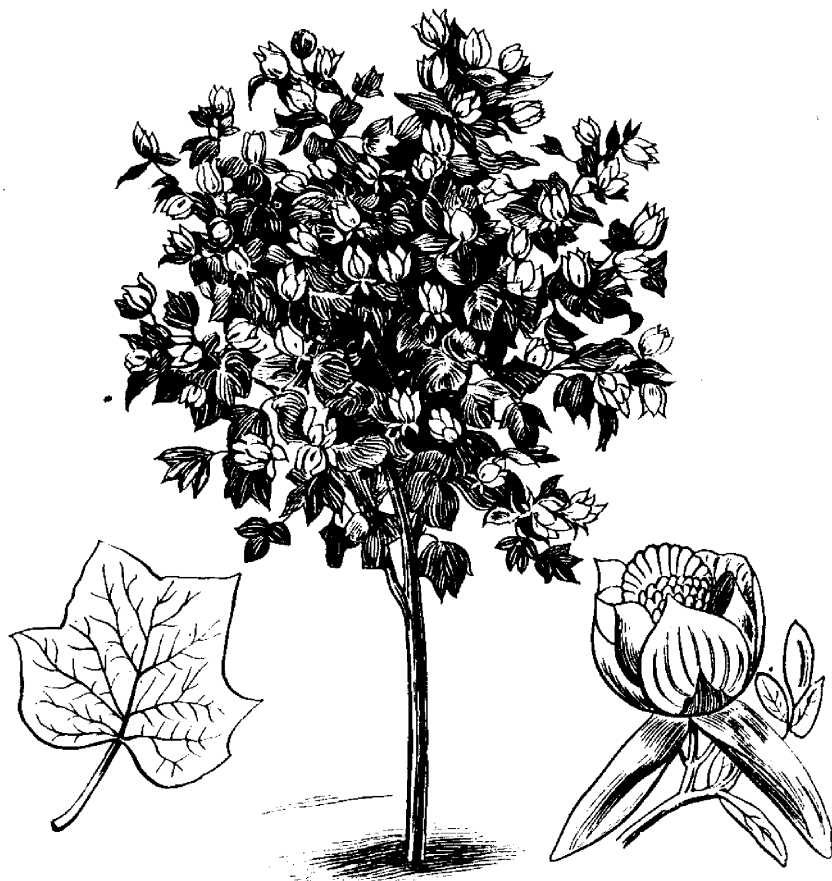


FIG. 1334.—THE TULIP TREE.

while we have been availing ourselves of the beauties and charms of trees, plants and shrubs, from far off China and Japan, and, indeed, from all parts of the world, we have yet lost sight of one of our own trees of surpassing attractiveness and grandeur. In days gone by, the Tulip tree, now so rare, was to be

anywhere east of Toronto, except under cultivation in Prince Edward County, where it succeeded well. With its truly tropical splendor of color in flower and foliage, and its form full of grace and majesty in all its parts, it well deserves to be rescued from its present oblivion, and to be installed as one of our most

## THE TULIP TREE.



FIG. 1385.—TULIP TREE—*Liriodendron tulipifera*. (Height 76 feet.)

employed trees, wherever a grand effect in park or avenue planting is desired, or the home grounds are to be beautified.

Liriodendron Tulipifera—The tulip-bearing lily-tree! Such is the title, suggestive of beautiful and graceful ideas that scientists have bestowed on the subject of our paper, and very appropriately is it so named. Its profusion of yellow turbaned flowers in May and June, resemble a veritable tulip garden, its leaves wear the same gloss as the calla's foliage, and its straight, smooth stems shoots up bare (until a great height is reached) of leaves and branches, like some gigantic lily stalk. Let us follow out the whim of describing it by similes and we must then call the leaves violin-shaped, for thus some descriptions concur in characterizing it, while the flowers, poets seem to agree, are like chalices, for Pickering says:

"Through the verdant maze,  
The Tulip-tree,  
Its golden chalice oft triumphantly displays."

And Bryant following on, makes the same comparison in his lines,—

"The Tulip-tree opened in airs of June her  
multitude  
Of golden chalices, to harmony of birds,  
And silken-winged insects, of the sky."

The flowers, to give a more definite description, are solitary, fragrant, of a greenish yellow color, marked within with orange. The sepals are three, reflexed. The corolla, composed of six petals in two rows, has a breadth of about  $1\frac{1}{2}$  or two inches.

The leaves are large and handsome, and of a rich bright green hue changing to a beautiful yellow in autumn. The summit has a fine even symmetrical form, in keeping with the elegance of its trunk. In the Western States the tree has been known to attain to a height of 140 feet, but in the Middle and Eastern States and in Ontario it is not so large, though it will reach an altitude of upwards of 100 feet. It thrives best in a deep, rich, well-drained loam, and in a sheltered position. Its roots are, unfortunately, tender, and when large it is difficult to transplant. Small trees should be secured for planting, and care must be taken not to expose the roots to sunshine or wind.

The Tulip-tree has very few insect foes to contend with, the bitterness of the bark and leaves securing immunity for it from all these pests. We would suggest it as a desirable ornament for the home grounds in the southern parts of the Province. For avenues, its stately columnar stems and thick shading canopy of foliage would render it peculiarly suitable, and in parks it would give splendor and charm to the landscape, either standing in an isolated position or forming one element in the composition of a group.

In conclusion, we may add that the tree is obtainable at a moderate price at several of the larger nurseries in Ontario.

A. E. MICKLE.

Maplehurst, Grimsby.

## SHOWY ANNUALS.

**M**ANY of the annuals that have a place in seed catalogues are so surprisingly beautiful that a few of the best should in all cases have a place in the mixed border. With but a few exceptions, they do not continue in bloom a sufficient length of time in beds, but in the mixed borders they are of great service in maintaining their attractiveness at midsummer, and are therefore especially useful in gardens where there is an objection to the association of zonal pelargoniums and other of the tender bedders with hardy plants. Some of the best of the annuals for the flower gardens have been already mentioned in these pages, and we now purpose giving the names of a few others that well deserve the most widely extended cultivation.

### CALLIOPSIS.

The Calliopsis, or Coreopsis as they are sometimes designated, are much hardier than the majority of the annuals and bloom profusely for a considerable period. Sown in the autumn they come into bloom early in the summer, and plants raised from springsown seed bloom freely towards the end of the summer, when their flowers are especially valuable. The seed should be sown where the plants are to be grown, and as overcrowding is very injurious, care should be taken to thin the plants to three or four inches in each group before they have become drawn. A moderately rich soil is an advantage, but they are not more exacting in their requirements than the majority of the hardy annuals. The average height is two feet, and they should have a place in the second or third row.

### CANDYTUFTS.

The annual candytufts are particular-

ly useful when it is desired to produce a good display of color in the shortest possible space of time, as they grow freely and quickly come into bloom. They do not remain in flower for any considerable period, but they are less ephemeral than is generally supposed to be the case when placed under favorable conditions. As in the case of the calliopsis the seed should be sown where the plants are to remain and the seedlings be thinned to four or five in each patch. Generally they are allowed to remain as thick as "mustard and cress," with the result that they not only last a short time but fail to produce a good effect. With an average height of twelve inches they appear to best advantage in the front row or along the margin. Carmine Dwarf Rose, Dark Purple, and White Spiral are the finest kinds in cultivation.

### CHRYSANTHEMUMS.

The annual chrysanthemums arranged in groups, consisting of about three plants each, towards the back of the border, are singularly effective. The practice which gives the most satisfactory results with the least possible expenditure of time, is to sow the seed in boxes, and place in a frame, where they should remain until the plants are an inch or so in height. The plants must then be hardened off and pricked out, where they are to remain three in each group. *Atrococcineum*, *Carisiatum*, *W. E. Gladstone*, and *Segetum* comprise some of the best. The last named is especially useful for the supply of cut flowers, but on light soils there is some risk of its becoming a weed, unless self-sown plants are kept under.

### CLARKIAS.

Although not very continuous in

## SHOWY ANNUALS.

flowering, the clarkias are so attractive while in bloom as to fully justify their having a share of attention. They appear to the best advantage when arranged in groups of three or four plants each along the second row. There is no objection to the seedlings being raised in boxes, and pricked out where they are to bloom, as advised for the chrysanthemums, but as they do equally well when sown where the plants are to bloom, and as it is desirable to economize time as much as possible, particularly during the spring months, sowing in the open should be generally adopted. *Elegans*, *Integripetala*, and *Pulchella* are all very attractive.

### CONVOLVULI.

All the convolvuli are free and continuous in blooming, and the varieties of *C. minor* are useful both in the mixed border and in beds. To have them in bloom early in the season sow the seed in boxes, and in due course prick the seedlings off into large sixties, putting two in each and plant out without separating them. The second row is the most suitable position for them in the border. The typical form, which has bright blue flowers, is the best, but the rose and white varieties are well worth growing.

### ESCHSCHOLTIAS.

These are wonderfully showy, and afford a ready means for producing a bright display of color at a very small expenditure of either time or money. It is preferable to sow them where they are to bloom, and this may be done either in the autumn or spring, or at both seasons, as may be desired. Overcrowding, as in the case of other annuals, is inimical to success. The most desirable forms are *Crocea alba*, *Crocea fl. pl.*, and *Mandarin*.

### LINUMS.

All the linums are elegant in growth, and the majority are very showy. The best course of procedure is to sow the seed in boxes, then prick off the seedlings into large sixties, three in each, and transfer them to the borders without separating them. They appear to the greatest advantage in the second row. *Azureum* and *Grandiflorum Coccineum* can be the most strongly recommended.

### NASTURTIUMS.

The varieties forming the Tom Thum group are admirably adapted for massing and all for brightening up the mixed border. They are especially useful on hot, dry soils, as they are well able to withstand the effects of both heat and drought. Highly satisfactory results are obtained by sowing in boxes under glass and picking off into three-inch pots, as advised for several other subjects. They ought also to be planted out without being separated. It is essential to success that the soil be rather poor and the position be fully exposed to the sun. *King of the Tom Thumbs*, *Golden King*, *Empress of India*, and *Ruby King* are all of the highest excellence.

### NEMOPHILAS.

Like the candytufts the *Nemophilas* do not remain in bloom a sufficient length of time to justify their being grown otherwise than in limited numbers, but they are so attractive when in flower and so useful for the production of a display of color quickly, that they must not be overlooked. The seed ought to be sown in patches along the front of the border where the plants are to bloom, as they are too ephemeral to afford an adequate return for the labor involved in sowing under glass and then transplanting them to the border. The seed may be sown both in the autumn



FIG. 1386.—A FLOWER BORDER, AFTER CORNELL BULLETIN.

and spring with good results. The most effective of the several kinds is *Insignis*, but *Atomaria* and *Maculata* are well worth growing.

#### POPPIES.

The annual poppies are so readily raised in quantities and rich in color that they are perhaps, unsurpassed for the production of a brilliant display in the borders at a minimum of expense and labor. But, as they are ephemeral in character, it is not advisable to grow them in large quantities; the best course is to sow the seed in patches towards the back of the border, and to thin the seedlings sufficiently to enable them to attain their full development. When overcrowded, as is so generally the case,

they come into bloom very quickly, and remain in good condition so short a time as to contribute but little to the attractions of the border. The Shirley strain is especially good and should have first attention, and the Carnation and Paeony-flowered types are well worth growing.

#### SCHIZANTHUS.

Less showy than some of the subjects, the schizanthi are remarkably attractive and are valuable for the variety they afford. It is a good practice in the culture of the annuals to sow the seed in large sixties under glass and to thin to three plants in each and transfer them to the borders without separating them. They appear to the greatest advantage



## CATALPA.

in the mixed border. The most suitable kinds for border culture are Grandiflorusoculatus, Papilionaceus pyramidalis, and Pinnatus.

### ZINNIAS.

The zinnias have the great advantage of being free and continuous in flowering as well as showy in color, and may therefore be employed to great advantage both in beds and borders. To obtain strong plants by the end of May the seed should be sown at once in pans and be placed where it can have the assistance of a brisk temperature during the process of germination. As soon as

the seedlings are of a suitable size they should be potted off singly or pricked off into boxes and be placed where they can be kept close and warm until established, when they must be gradually hardened off. The double and single varieties are equally attractive in the flower garden and the selection may therefore be left to individual taste. The type known as Robusta grandiflora plenissima is useful for the rows, and Haageana imbricata fl. pl. is well adapted for front lines.

FRANK BRUNTON.

*Boston, Mass.*

## CATALPA.



FIG. 1387.—CATALPA.

SIR, — Apropos of your short article on the Catalpa in a recent No. of the HORTICULTURIST, I send you a photograph showing the foliage and flowers of this beautiful though not very hardy tree. The photograph well illustrates the large, heart-shaped leaves and showy flowers and panicles which may serve to make more clear to your readers the admirable description given in your journal.

The photograph was taken last summer from specimens cut from trees growing on the Experimental Farm, Ottawa.

Yours faithfully,

FRANK T. SHUTT.

*Chemist, Experimental Farm.*

## A TRELLIS FOR THE CRIMSON RAMBLER.

SO many of our readers have selected this rose from our list this spring, that any information concerning it will be widely read. In all, we have sent out about 1,500 plants of the Crimson Rambler, and thus introduced this excellent novelty into nearly every part of Ontario. We noticed in *Vick's Magazine* a trellis for this and other climbing or half climbing roses, with note as follows:—

Besides training climbing roses on walls and about verandas and porches, as most frequently seen, and where they are displayed to fine advantage, they may also be put to other uses.

A low trellis may be made with posts and wire. The post can stand four feet above ground, and be furnished with three lengths of wire—one along the top, one about fifteen inches from the ground, and the other equally distant from the upper and lower one. If the posts are six feet apart, a strong plant of the Crimson Rambler will fully occupy three spaces between the posts, or eighteen feet in length with one or more canes to each wire. The wire should be about number twelve in size and be drawn tight and fastened to the posts by means of staples, in the same manner as grape trellises. The trellis can run along by a garden path and be of any desired length. Not only what are called the Rambler roses, but our hardy Baltimore Belle, Queen of the Prairie, and other hardy climbers, and at the South, the Ayshire, Banksia, and the Noisette and Climbing Teas can be managed in the same way.



A LOW ROSE TRELLIS.  
FIG. 1388.—

## THE ROCK GARDEN.

TO those who have the requisite location, there are few more interesting features of out-door gardening than that styled the Rock Garden. I saw two of the best examples of artificial construction last summer that perhaps are to be seen, and it seemed to me that we might do more of it here. We are limited to a comparatively few plants in our climate; the exquisite Saxifrages of the European Alps, the Primulas, Androsaces, Ramondias, Cyclamens, and many of the plants they use abroad will not succeed here, and for that matter some of our choicest Rocky Mountain Alpines absolutely refuse to grow when brought from their high estate, but there are many that will succeed if given a little attention. A well-constructed garden of this sort has a most charming effect when the moss pinks, columbines, and various spring-flowering bulbs are in bloom. It is at all times advisable to see that the strong do not crowd out the weak, and in this kind of planting it is not possible to use the hoe, and seedlings are sure to appear in abundance, often to the exclusion of the choicest plants. This is true also of borders, and we find that in a short time the best larkspurs and phloxes seem to revert to original types, and columbines hybridize out of recog-

nition; but it is all explained by the fact that seedlings are too numerous, and, until they bloom, have much the same appearance. I am inclined to think the Aquilegias are not strictly perennial; they flower for a year or two, and then disappear. I think this is true also to some extent with all plants that have not a tuberous or bulbous root. We all know how difficult it is to keep the true Rocky Mountain Columbine, or the Siberian *Aquilegia glandulosa*; this all means that we must have a reserve border, where a few plants can be isolated for seed, and the seedlings drawn on to fill up losses, or we can test some doubtful plant and propagate desirable ones. There are many reasons which make a place of this description desirable that will occur to all.

Most hardy plants are easily raised from seed, and a seedling plant that is healthy, even though it has never bloomed, is preferable in the long run to any other; there is no serious check in transplanting, neither has it been weakened by flowering. The best time to sow seed would be as soon as gathered; but we usually have too much hot weather at that time, and it is best to wait until a cooler time in fall.—Mr. Orpet before Mass. Hort'l Society.



FIG. 1389—

A HYDRANGEA IN BLOOM.— I am sending you a photograph of a hydrangea which I have in bloom. It will show you the success of an amateur florist, and you may think it worthy of a place in your valuable magazine.—A Subscriber at Fergus.

## PRUNING ROSES.

**A**N important operation connected with planting is pruning, which is better done immediately after being planted.

A pruning shears is best for this purpose, as if a knife is used the plant is likely to be loosened in the soil. Only general instructions on this all-important operation can be given. Right here it is well to say that if any of the roots are bruised they should be cut away to the sound part, and if any are of immoderate length they should be shortened back before planting. The strength of a shoot will determine how far it should be cut back; if very strong, cut it back to four or five eyes from the main stem, if weak, to the second or third eye, and let the topmost eye be on the outside of the shoot wherever possible. If the branches are crowded and the shape of the plant necessitates it, drive in a sharp-pointed stake — not too large — and spread them by tying, or cut enough away to ensure against over-crowding as they grow. Those directions apply

mainly to hybrid perpetual roses, the tea or monthly roses only require a shortening back of the main shoots, severe in the case of soft, immature wood, and less so on well ripened shoots, and the cutting completely away of all light spray wood, which will only produce foliage and no flowers. When the plants bloom and the flowers are cut off, either for use or after they fade, it is better to cut back to the second eye as they are more apt to flower again than if a greater portion of the flowering shoot was allowed to remain on the plant.

The distance at which to plant varies somewhat according to the class and variety; but as a general rule it is safe to say that the hybrid perpetuals may be planted eighteen to twenty inches apart, hybrid teas fourteen to sixteen inches and the tea or monthly roses twelve inches. The climbing roses, if planted on a trellis or fence, should be planted about six feet apart.—Gardening.

## PRUNING HARDY SHRUBS.

**H**OW do you prune your hardy flowering shrubs? Some persons take the shears and clip the bushes to a perfectly rounded or oval form, something as they would prune a hedge, and then call the job well done. Others have a great fancy for tree-like forms in shrubs, and they cut with a view to developing a trunk to support the leafy head. Neither of these ways are to be recommended, where the object is handsome shrubs and a profusion of bloom. In the case of the majority of shrubs, to clip them in winter to a rounded form is to cut

away just so much of the flowering branches, for the bloom appears on the young wood of the previous year. To aim for the tree form of shrubs, in most cases results unsatisfactory, for the reason that it is unnatural, and the trunks are almost sure to be too weak for the head, hence they will become crooked and ungainly. After a long experience with this valuable class of decorative material, the writer is convinced that by all odds the best way to trim is after a manner to preserve the natural characteristics of the shrubs. To do this, all of the older and unthrifty

## GROWING FLOWERS IN VASES.

wood may be thinned out at this season of the year, and the younger growth be headed back only a trifle. It is a good plan, then, immediately after the blooming season of the majority of kinds, to cut back the flowering wood; this will lead to a fine crop of young shoots later for the next season's bloom. A general exception should be noted in the case of such shrubs as do not bloom on the previous year's shoots, but on those that

grow the same season. Among such are hardy hydrangeas, altheas, coronillas, burning bush, late-flowering spiraeas and roses. All such should be severely pruned early in the spring, cutting back not only the past season's shoots to two buds each, but also cutting away enough of the old growth to leave the bush quite compact at the beginning of the season's growth.—Vick's Magazine.

## GROWING FLOWERS IN VASES.

**P**RETTY, delicate vines give the bright, finishing effect to a collection of flowers that lace gives to draperies. The best place for these airy creepers and delicate drooping plants is in vases and hanging baskets. These need not be expensive nor of elaborate designs to make lovely objects on the lawn or piazza. Boxes covered roughly with a rustic net-work of knots and twigs, or evenly with split rough-barked limbs put on in bold patterns are quite as handsome in their way, and much more suitable to ordinary surroundings, than marble or bronze vases. Dozens of charming designs suggest themselves as one works. Vines for out door vases should be delicate, but hardy. The Nasturtium, refusing to run in any methodical way, utterly ignoring the most temptingly drawn string, scorning the most elaborate lattice, escaping the most uncompromising woven wire and insisting upon rollicking about in the most unhampered manner,

is just the thing for your vases. Here the roots can be kept damp and the beautiful leaves and gorgeous flowers wave and glow from early spring until severe frost. Another extremely pretty and less common vine is *Thunbergia*. The flowers run through the yellows and creams, but the colors are softer and the blossoms daintier. Many of them are delicate and pretty as Primroses. Both these vines are hardy annuals, coming easily from seeds, and furnishing many handsome flowers. Some varieties of *Clematis* are lovely for vases, and the tender *Ivies* do well if somewhat shaded. For the centres *Heliotrope* and *Fuchsias* are better than *Geraniums*, even in hot sunshine. But if an annual is desired, nothing equals the *Petunia*. It blooms constantly, is of half trailing habit, is hardy and always beautiful. *Petunias* grow much better in vases than in beds. Like most annuals they are hungry and like rich food.—Parks' Floral Magazine.

*ALYSSUM saxatile compactum* yields a mass of golden yellow flowers, and, like the arabis can be used with the spring flowering bulbs either for an edging or

planted in a mass, allowing the bulbs to come up all through it; the effect will be very pleasing. Sow it now (July).—Gardening.



## The Canadian Horticulturist

**SUBSCRIPTION PRICE.** \$1.00 per year, entitling the subscriber to membership of the Fruit Growers' Association of Ontario and all its privileges, including a copy of its valuable Annual Report, and a share in its annual distribution of plants and trees.

**REMITTANCES** by Registered Letter or Post-Office Order are at our risk. Receipts will be acknowledged upon the Address Label.

**ADVERTISING RATES** quoted on application. Circulation, 5,000 copies per month.

**LOCAL NEWS.**—Correspondents will greatly oblige by sending to the Editor early intelligence of local events or doings of Horticultural Societies likely to be of interest to our readers, or of any matters which it is desirable to bring under the notice of Horticulturists.

**ILLUSTRATIONS.**—The Editor will thankfully receive and select photographs or drawings, suitable for reproduction in these pages, of gardens, or of remarkable plants, flowers, trees, etc.; but he cannot be responsible for loss or injury.

**NEWSPAPERS.**—Correspondents sending newspapers should be careful to mark the paragraphs they wish the Editor to see.

**DISCONTINUANCES.**—Remember that the publisher must be notified by letter or post-card when a subscriber wishes his paper stopped. All arrearages must be paid. Returning your paper will not enable us to discontinue it, as we cannot find your name on our books unless your Post Office address is given. Societies should send in their revised lists in January, if possible, otherwise we take it for granted that all will continue members.

### ↻ Notes and Comments. ↻

A CONSIDERABLE CHANGE seems to be coming over our fruit prospects this season. The leaf-curl is taking half the peach crop, a blight is affecting the apples where the load was over heavy, and a large portion are dropping. The Greenings, the Cranberry Pippins, and the Astracans seem to be suffering considerably in this way, especially on a soil that was well cultivated last season. Evidently vigor of growth helps to hold the fruit, and since this is promoted by both manure and cultivation it is evident that these are both essential to the best success.

MR. W. T. CRANDALL, the agent for the Dominion in Great Britain, visited Grimsby recently, and gave the fruit growers a full account of his work in Great Britain, placing our fruit on the Glasgow and London markets. He said

there was no difficulty in selling unlimited quantities of our finest fruits; they would find quick sale at highest prices. The great point was to compete with French and California fruit in point of packing, and to put up only the finest grades.

MR. GRINDLEY called at Grimsby on the 4th June. He has just received an appointment from the Department of Agriculture to go to Great Britain in July, in order to work up a demand in various towns for Canadian food products. He has also instructions to look after dairy and poultry interests. Mr. Grindley is an energetic young man, who has had considerable business experience, and will no doubt accomplish a good deal in our interests.

**LABELS.**—Strips of zinc make excel-

## NOTES AND COMMENTS.

sent durable labels for recording the names of varieties of fruit trees planted in the orchard. We usually have them cut 5 or 6 inches long and about  $\frac{3}{8}$  to  $\frac{1}{2}$  inch broad. They can then be wound about a limb in such a way as to give with the growth, and thus be harmless. Often we fasten a zinc tag to the trunk of a tree with a wire nail.

### INK FOR WRITING ON ZINC LABELS.—

A good formula for writing on zinc labels is made as follows:—

Copper Sulphate . . . . . 1 oz.  
Lampblack . . . . .  $\frac{1}{2}$  oz.  
Rainwater . . . . .  $\frac{1}{2}$  pint.

Mr. G. C. Caston writes that he is using this formula, and is much pleased with it. We find an ordinary led pencil makes an indelible mark on the zinc labels, if they are first allowed to corrode a little, and is more convenient than ink.

MR. H. H. GROFF, of Simcoe, who was doing such good work in horticultural lines, in hibridizing Gladioli and Cannas, and whose new creations were taking a front place in the estimation of gardeners, has accepted the position of Manager of the Molson's bank of that town, and is succeeded in his special lines of bulb raising, by J. A. Campbell, of Simcoe. We regret that so promising an originator of novelties should have been thus tempted away from the care of his floral treasures.

SPRAYING with Bordeaux mixture (4 lbs. sulphate copper, 4 lbs. lime, 40 gallons water), seems to be a general panacea for fungous diseases of plants generally, such as mildew of grapes, rot of plum and cherry, leaf blight of strawberry and tomato, and even for tomato rot. This latter, however, does not yield very easily to treatment, and it is best to choose such varieties for planting as are least liable to the fungus.

KEROSENE EMULSION is the cure all for such insects as plant lice, mealybug, red spider, thrip, and scale insects of all kinds—but for the latter a strong solution is necessary. The formula is  $\frac{1}{2}$  lb. hard soap; 1 gallon boiling water; make strong soap-suds with soft water, and add, kerosene, 2 gallons while boiling stir well and an excellent emulsion will be formed. Dilute 4 to 25 times with water, before applying. Pumps are now being made with kerosene attachment which mingle the kerosene with the water in the spray, and thus save the trouble of making the emulsion. The writer believes, from his experience, that if a *sufficiently fine spray of kerosene* can be made, no dilution with water is necessary.

WOOD ASHES have been recommended by some as a preventive of apple scab, but it has been found by experiments at the N. Y. Station, that ashes applied to the soil have no value in this direction.

FOR ROSES affected with the rose aphid and thrips, we have been applying an exceedingly fine spray of pure kerosene oil applied with a large tin atomizer known as the Mitchell hand-sprayer. So far we have not observed the least evil effects upon the bushes, while the pests have disappeared like magic.

MR. ALEX. VEITCH, the gardener at the Gore, see June, 1897, says he has resigned his position, and is open for an engagement. His address is Orchard House, Hamilton.

THE GREATER BRITAIN EXHIBITION OF 1899.—We have received a letter from the authorities of the London Exhibitions, Limited, to be held in Earl's

## THE CANADIAN HORTICULTURIST.

Court, from May to October, 1899. This letter points out the small amount of space at the Paris Exposition, that will be at the disposal of the British colonies, viz., 60,000 square feet; and the cost of this space, which will be 10/ per square foot.

"Under these considerations," says the letter, "a proposal has been made to the Premier of your Colony, that he should be officially represented at the Earl's Court Exhibition, where its wealth, resources and manufactures would be brought before the public of the United Kingdom."

This matter is under the consideration of the Hon. Sidney Fisher, who is presently to visit England, and will inquire into it fully, as well as into other questions of vital importance to the export trade of Canada's fruit product.

GRAFTING.—A subscriber asks if the ends of the scions should be waxed, when grafted. This we never do ourselves, and yet meet with very good success. Mr. W. T. Macoun, Horticulturist, Ottawa, says: "We have not found it actually necessary to do this here, but find that the scions sometimes split back to the first bud if this is not done, so that as a general rule it is best to wax."

HERSEE'S STRAWBERRY is a fine size, but samples which came to hand, June 13, were over-ripe for sampling. Mr. Hersee writes: "This berry was ripe last year, June 5th." He claims for it productiveness, good flavor, and uniformity of shape, in addition to coolness.

MR. E. B. STEVENSON'S strawberry experiments are being continued with much interest on his part, and much to the public advantage. Some of his hybrids, especially B. No. 3, are enormous in size. The writer and assistant visited his experiment plots on the 15th of June, and secured excellent photos of the following varieties:—Carrie, Glen

Mary, Margaret, Wm. Belt, Ridgeway, Hall's Favorite, Seaford, Geisler, Mastodon, Greenville, Tennessee, Bubach, Nick Ohmer, Van Deman.

APPLE SCAB.—The scab has suddenly appeared (June 16), upon the apples, in a severe form. The Department has sent out a circular warning the public of the great danger to their orchards if spraying is neglected.

THE LARCH SAWFLY.—On visiting Guelph on the 24th of June, we were surprised at the brown and dead appearance of the grove of larches across the road in front of the College, until we learned from Prof. Hutt that it was being devastated by a new enemy, in this section, viz., *Nematus Ericsoni*, the larch sawfly. So suddenly had this appeared, and so quickly had it stripped the trees, that the mischief was done before its presence was detected. Mr. W. M. Orr, reports a similar worm affecting the native spruce on the mountain above Stoney Creek. It strips the trees bare of foliage, as a fire would do, and that very quickly. Evidently we must fight or give up to the worm.

A GOOD RECORD.—Mr. Fred. A. Saunders, youngest son of Dr. Wm. Saunders of Ottawa, an honor graduate in science of Toronto University, has recently been awarded a scholarship in Physics at John Hopkins University, Baltimore. Now he has won the fellowship for 1898 to '99, the highest acknowledgment of merit in the gift of the University.

THE Gardeners' Chronicle announces that Mr. Fetisoff, an amateur horticulturist at Voronezh, Russia, has achieved what was believed to be impossible, the production of jet black roses. No details of the process have been received.



## \* Doings of Other Societies. \*

### .Out-Door Meeting of Hamilton Horticultural Society.

By invitation of the president, Mr. A. Alexander, the Hamilton Horticultural Society held its monthly meeting at his residence, No. 182, Wentworth St., South, on the evening of Monday, June 6th.

The members turned out in force, an unusually large number of ladies being present.

The earlier part of the evening was spent in inspecting the floral display on the beautiful lawn and in the conservatory. Among the out-door plants *Hemerocallis flava*, *Cypripedium pubescens*, *Plumbagos*, *Cannas*, *Henchera sanguinea*, *Phloxes*, *Deutzias*, *Viburnums* and *Wigelias* were very fine. The *Aquilegias*, *chrysantha*, *caerulea*, and Long spurred hybrids were especially admired.

In the conservatory the begonias attracted much attention, President Carnot and rubra being especially grand. A magnificent *Bougainvillia*, covered with flowers, had climbed a fourteen-foot pillar, and, failing to push through the glass, hung down in long festoons.

When darkness had risen so high as to veil the open air beauties from sight, the members assembled in the spacious verandah.

President Alexander in formally opening the meeting, welcomed his guests and expressed his pleasure at their presence. He said, "Many little and seemingly trivial things go far in making floriculture successful." As an instance, he remarked, that all bloom should be cut from plants as soon as faded so that the strength would not be wasted in maturing seed. Bulbs so treated increased in vigor and size and many spring bloomers produced a second crop of flowers. He then introduced Dr. Beadle of Toronto, who gave an interesting address, the spirit of which stamped him as an ardent lover of nature. The Doctor said that he was pleased to meet the members on this his first visit. The large attendance, deep interest, and friendly feeling being very gratifying.

He thought that flowers must have been created expressly for human beings. Some years ago the theory, that floral displays were only intended to attract insects, was advanced and many articles had been written in support of this idea, the usually light colored night bloomers being supposed to be especially designed to attract moths, but it had been proved that insects found the nectar, etc., just as readily when the bright colored petals and sepals were removed. They needed no colors to direct them to the treasures that they sought. Then why are the wild flowers so arrayed? nobody planted them thus. They sometimes bloom almost unseen, beautiful beds of anemones, ranunculi, cardinal lobelias, habernarias, etc. The great Creator has made them to gratify our tastes and intel-

ligence. Nature is an expression of the Maker.

Many wildlings can be grown with success. In his garden he had *Cypripedium spectabile*, *pubescens* and *parviflorum*, *Habenaria bracteata*, *onoclea*, *struthiopteris* and many other native plants and he would have more if he had the ground. Begin with simple forms. Experiments are valuable and interesting. Cultivation or preservation is necessary to prevent extermination of many rare plants. The very rare orchid, *Epipactis Helleborine*, was plentiful in the neighborhood of Toronto a few years ago, but cows had been turned into the grounds and now scarcely a plant could be found.

In answer to questions the Doctor said, "Peach curl is now being experimented on, but it is too early to state results. Sulphate of copper is the best fungicide for fruit trees and potassium sulphide for gooseberries. The growth of leaf fungi was described. Mulching in Winter does not retard the early growth of peaches. Specimens of a plum pest submitted by Rev. M. McLaren was said to be a scale but *not* the San Jose variety. An alkaline wash applied at the proper time would probably destroy these insects and kerosene oil had been used with success during the winter. Eggs on a grape leaf, collected by Mr. Ogilvie, were probably deposited by a leaf hopper. The habits of scales and borers were described and the speaker hoped that some person would find and work out the life history of an insect destroying scarlet flowered thorns in Hamilton.

At the close of the discourse the sincere thanks of the assemblage were tendered Dr. Beadle for his very instructive and entertaining talk.

After the Doctor's reply B. E. and Mrs. Charlton invited the Society to hold its next meeting at Boulder Wood, their summer residence on the mountain brow.

MR. W. M. ROBSON, of Lindsay, writes that at a recent meeting of the Lindsay Horticultural Society, it was decided to use every means of destroying the tent caterpillar. Mr. Robson says:—

"In our opinion nothing would be so effective as the action of Government in enforcing under penalty the entire destruction, (in the earliest stages), of the Tent and Forest Caterpillar, wherever found, on public or private, the cutting down and destroying of that species of wild cherry, commonly known as choke cherry, which is frequently found in neglected fence corners, and is known to be favorable for harboring and propagating these pests. We hope these suggestions may meet

the approval and assistance of sister societies, leading to a united effort to memorialize Government to add these clauses (by way of amendment or rider) to the Black Knot (or similar) Act, which could be enforced by the same inspector, during these periodical scourges.

### Flower Exhibit at Grimsby.



FIG. 1390.—LARKSPURS FROM WEBSTER BROS.

On invitation of the Secretary of the Fruit Grower's Association of Ontario, a united meeting of the Hamilton and Grimsby Horticultural Societies was held at Maplehurst on Monday evening, the 20th of June. If not as large as sometimes seen, the rose exhibit was very superior in quality, and called forth many words of praise. Mrs. Jno. Knox, of Hamilton, contributed a

large and magnificent basket of roses, and Messrs. Ogilvie, Evel, Anderson, Webster Bros., Burton, and Dr. Russell, showed fine samples of roses. These gentlemen were all from Hamilton. Mr. Anderson's sweet peas were of great interest (being grown from seed sown last fall). The following is a partial list of the Grimsby exhibitors: Mrs. Palmer, Roses, poppies, sweet peas; Mrs. Henry Smith, pampas, ribbon grass and roses; Miss Millard, fine samples of Margaret Dickson and other roses; Mrs. Adolphus Pettit, and Mr. A. Terryberry, fine samples of Paul Neyron and other roses; A. Cole, sweet peas, window boxes, lobelia, etc.; L. Woolverton, Luizet, Washington, Bonstetter and other roses; Russian Salvias, Schizanthus, Canterbury Bells, etc.

Messrs. Stone & Wellington, of Fonthill, sent large named collection of handsome roses, from their ten acres of rose plants, which added much to the variety of the exhibit. Mr. A. Alexander's fox gloves and larkspurs were the centre of attraction; as also a fine collection of harebells, Larkspurs and peonies from Webster Bros., shown in Fig. 1390.

The sociality of the occasion was of marked interest until about nine o'clock, when the guests were entertained by music and addresses. Mrs. F. Unwin, of Grimsby, who is already favorably known to the Fruit Grower's Association, sang a solo, and Misses Brodie and Metcalfe gave a charming violin duet. The address of the evening was given by Mr. A. Alexander, President of the Hamilton Society, who not only aimed at interesting all in his favorite pursuit, but also gave many practical cultural hints.

The meeting was such a success, that we hope it will not be the last one of the kind.



FIG. 1391.—POPPIES FROM MRS. E. J. PALMER.

THE WOODSTOCK HORTICULTURAL SOCIETY decided, at their last monthly meeting, to hold a fruit and flower show on the 4th and 5th of August, in the Curling Rink, with an admission fee of 10 cents. Committees were appointed on Decorations, on Exhibits, on Arrangements, etc., and a most enjoyable season is anticipated.

THE GRIMSBY HORTICULTURAL SOCIETY does not propose to hold another exhibit until the November Chrysanthemum show, because of the busy fruit season now coming on.

MONTHLY evening meetings of the Horticultural Societies, with a table of seasonable floral exhibits, seem to be very desirable. At each meeting a single paper is read and discussed. Invitations to hold lawn meetings in the summer season are well worth accepting. One of those meetings was held at "Boulder Wood," Hamilton, the residence of Mr. and Mrs. John Charlton, on Monday evening, June 27th, from 7 to 10.



## ✧ Question Drawer. ✧

We shall be glad to answer all questions relative to Horticulture, Floriculture, and Forestry, in these columns, but cannot undertake to send answers to such questions by mail.

### Yarrow.

**1012.**—SIR,—Please tell me the name of the enclosed weed. It is just appearing on my farm. Is it a dangerous pest?

A. CAMERON, Tiverton.

*Reply by Dr. Fletcher, Central Experimental Farm, Ottawa.*

The weed sent by Mr. Cameron is the well-known yarrow (*Achillea Millefolium*). The weed grows in pastures and way-sides in every part of Canada from the Atlantic to the Pacific. It can hardly be called a dangerous pest, because it is a plant used in the Old Country to mix with pasture especially for sheep runs. Our Canadian sheep, however, do not seem to relish it, for it is almost invariably left when there is anything else left for them to eat.

### Dandelions and Ants in Lawn.

**1013.**—1st. SIR,—My lawn is near a field where dandelions grow most abundantly. I have so far succeeded by continued digging in keeping it almost free from them. But I find that it damages the lawn very much. Is there any other way to fight them? Would a salt water, lime water, or lye water applied carefully do less harm than digging? I prefer no lawn at all to a dandelion bed.

2nd. How can I get ants out of my lawn? Hoping for an early reply to the above and success to the HORTICULTURIST.

A. B. CARMAN, Iroquois.

*Reply by Dr. Fletcher, Ottawa.*

In reply to the question one, to the best way of clearing a lawn of dandelions, I know of no other way than spudding the plants. This need not, however, destroy the appearance of the lawn very much if a proper instrument is used, such as a gouge at the end of a handle, which can be thrust down some

depth into the soil, so as to cut off the tap root of the dandelion, when the plant can be withdrawn without disturbing the grass very much. This year is a most remarkable one for the abundance of dandelions. How this phenomenon can be explained I know not, for the dandelion is an extremely vigorous and resistant perennial. I have cut up the root stock into half a dozen pieces and planted these at various depths, from 1 inch to 6 inches, and vertically and horizontally, and have found that all of the pieces grew, and those which were placed horizontally in the ground grew at both ends. However, notwithstanding this, many lawns have been cleaned entirely by persistent work in spudding out the plants, as suggested above.

Question No. 2. "How can I get ants out of my lawn? Probably the best way of getting ants out of a lawn is to pour a small quantity—about one teaspoonful—of bisulphide of carbon into the centre of the nests and then close the orifice by placing some earth over it and pressing down with the foot; at the same time, a lawn which is badly infested with ants generally requires fertilizing and watering, so that if water is available it is well to water the lawn as frequently as possible, and at the same time top-dress it with a small quantity of some special fertilizer, so as to help the plants and make them grow vigorously.

### Hibiscus Subviolaceus.

**1014.** SIR,—Would you please describe the following plants, with hints about their

## THE CANADIAN HORTICULTURIST.

cultivation, viz., *Hibiscus subviolaceus* and *Pilea serpaefolia*.

GEO. WOOD, Erasmus.

*Hibiscus violaceus* is one of the cultivated varieties of the well known *althaea frutex*, or *Hibiscus syriacus* of Botanists, introduced from Syria in 1896. It is a hardy deciduous shrub of the hollyhock family, and in the latter part of the summer is one of the finest of lawn shrubs, with large showy flowers, single and double flowers.

*Pilea serpaefolia* is another name for *Pilea mycrophylla*, a small leaved *Pilea*, the Artillery or Pistol plant of South America, a species of the Nettle family (*Urticaceae*) named from the explosive discharge of the pollen from the anthers.

### The Tent Caterpillar.

**1015.** SIR,—Is there any law compelling persons to spray fruit trees for the destruction of Tent caterpillars? I have fought the pest for years, but others have let them go, and as a result I have had terrible work this year. These caterpillars were never so destructive in this part of the country as this year. Wild cherry trees seem to be the natural breeding places of the pests, and ought all to be cut down. Can the Ontario Fruit Growers' Association do anything in the matter?

W. M. GORSLINE,

Secy. Durham Horticultural Society.

Our Association can and will use its influence with the Government to have something done to aid in the destruction of this pest. It is certainly not fair that those who, like Mr. Gorsline, are using every endeavor to keep their orchards clear of insects should have them overrun by those from their neighbors' orchards. Indeed, the reports from the Lake Huron district indicate that the tent caterpillar is so numerous as to constitute a public plague, in some instances even to stop the railway trains.

We have already acts providing for the destruction of noxious weeds, fungus diseases and certain insects, and we see no reason why a section may not

be added to one of these making it a penal offense for any orchardist to allow the tent caterpillar to breed in his orchard, and thus endanger the orchards of his neighbors. Mr. Saunders in his "Insects injurious to fruits," says "Governments might well enforce under penalties the destruction of these (tent) caterpillars, as their nests are so conspicuous that there can be no excuse for neglecting to destroy them, and it is unfair that a careful and vigilant fruit grower should be compelled to suffer from year to year from the neglect of a careless or indolent neighbor." We think this a subject worthy of the attention of our Association at its next Annual meeting.

The extent of the evil is reported as follows by The Sun:—

From different sections of the Province come reports of a plague of caterpillars. They stopped two trains near Ottawa last week, and forced, as reported lower down, the postponement of a picnic near Dunvegan. Now comes the report that the insects are swarming about Owen Sound. On the grade that extends outside of Owen Sound for 25 miles the rails have become so greasy from the crushing of the insects by the car wheels, that long freight trains have to be cut in two in order to permit of the engines hauling them.

The people about Dunvegan, Ont., had arranged for a picnic at McGillivray's Grove, but before the day for the picnic arrived a plague of caterpillars took possession of the bush and forced the abandonment of the outing arranged for.

The Toronto Globe calls attention to the birds as insect destroyers and the importance of their protection as follows:—

The reports from northern districts of the Province in regard to a plague of caterpillars and the temporary stoppage of C. P. R. trains as a result of crushing myriads of the pests on the rails should induce all who have any authority to strictly enforce the provisions of the law for the protection of insectivorous birds. The only effective means of fighting insect pests is by sparing their natural enemy. If school teachers and school inspectors would warn their pupils against robbing birds'

## QUESTION DRAWER.

nests of eggs or destroying the young and at the same time point out how useful the birds are as an ally of the farmer they would do the community an important service. Certain privileges for the collection of birds' eggs for strictly scientific objects may be secured through the Game Wardens, but it is unlawful to have in one's possession, without such a permit, either the eggs or young of any bird save eagles, hawks, owls, wild pigeons, blackbirds, kingfishers, crows, ravens, jays and sparrows.

But why should lazy people allow nests of these worms to increase in their orchards, and crawl over into their neighbors' orchards, when a day or two of hunting or spraying would destroy them, much more effectually than the birds.

### To Destroy Ants.

**1016.** SIR,—Please give me some remedy for destroying the ants in my garden.

L. R. HAERMAN, *Port Hope.*

I have never seen any injury by ants, except for the trouble they give in throwing up hills of dry sand on lawns and in flower borders. If your insects really are ants, they can be destroyed easily by procuring a small quantity of bisulphide of carbon and pouring about a teaspoonful of this liquid into the centre of the nest, and then covering up the hole with a little earth and pressing it down with the foot.

J. FLETCHER.

### Peach Aphis, Pear Slug, Etc.

**1017.** SIR,—What would you recommend for the fly on the black currant bush, also for the slug on the pear tree. And the worm that curls itself in the leaves of the peach tree, and oblige,

JAS. MUIR,  
*Hamilton, Ont.*

*Reply by W. T. Macoun, Horticulturist,  
Central Experimental Farm.*

Regarding the hard maple trees which your correspondent finds are dying: I may say that it is very difficult to state positively what kills the trees, unless one

saw a sample. There are, however, several causes why these trees die. One of these is from the depredations of a borer which works under the bark; another is that in cities where there is an escape of gas from the mains the trees are often very seriously affected. Of late years, also, since the asphaltting of streets and the laying down of granolithic sidewalks, trees have, apparently, suffered to a large extent on account of thus being deprived of a large amount of their food, air and moisture, and any trees which have a large top to support are in consequence often rendered sickly, and eventually die. The hard maple is, as a rule, a very healthy tree and is not often affected, under ordinary conditions, in the manner described. It frequently happens, also, that apparently a blight strikes certain trees, and it is, I think, in these cases impossible to save them.

W. T. MACOUN,  
*Horticulturist.*

### What Kills the Maples?

**1018.** SIR,—I have a very fine row of maple trees which have been planted about eighteen years, and which have grown splendidly, being in the very best of condition till about two years ago, when one died. Last summer I lost four and this spring about a dozen more are affected. The first indication of disease is young twigs dying, especially at the ends of the limbs and in one season the tree dies. The bark seems to loosen from the whole body of the tree. I have been unable to find out the cause. If any of your many readers have had a like experience I would gladly accept any information from them. I have ash and soft maples in the same row and these are not affected. As I have a large number of maples I am very anxious about them, for I fear I shall lose them all.

THOS. MACKLEM,  
*Hamilton, Ont.*

*Reply by Prof. Fletcher, Ottawa.*

The fly on the black currant bush which you complain of is probably the Currant Plant louse. The best remedy for this is to spray the bushes, particu-

larly under the leaves, with whale-oil soap—one pound in eight gallons of water; but, as a matter of fact this insect very seldom does harm to the black currants, owing to the fact that the natural parasites—the Lady-bird beetles—generally increase so much that they clean out the lice before they have injured the bushes.

The best remedy for the Pear Slug is undoubtedly to spray the trees with Paris green, 1 pound in 200 gallons of water, directly the slugs are observed.

The worm that curls itself up in the leaves of the peach tree is probably the caterpillar of the Eye-spotted Bud-moth, a very difficult insect to treat. The remedy which has given the best results is to spray the trees with Paris green 1 pound, freshly slaked lime 1 pound, and water 250 gallons. If you spray your peach trees with Bordeaux mixture to prevent the fruit rot, you may add the Paris green to the Bordeaux mixture in the same proportion as above, 1 pound in 250 gallons.

J. FLETCHER.

### Rosa Rubifolia.

1019. SIR,—Can you, through the Horticultural journal, inform me and perhaps others how the *Rosa rubifolia* should be treated to make it blossom. I have been cultivating one since 1893, which has shown no signs of blossoming yet, although in canes it has made vigorous growth. If it is a climber, perhaps I have been treating it wrong, in cutting back the canes. I have also a Caragana or Siberian Pea Tree, received in 1894, and said to bear yellow blossoms, but it has never blossomed. The tree is now about five feet high. Also the *Kosteletzkya virginica*, a flowering shrub, said to blossom the first year from seed; I

have had it growing for four years, and it is now about six feet high but no blossom has appeared. It being a southern production, perhaps the Canadian climate does not favor its blossoming; yet it appears to be hardy enough to stand the cold of our winters if protected. I have not seen it mentioned in any Canadian catalogue. It is said to be a genus described by Linnæus, and long since lost, for many years botanists searched for it. About six years ago a writer in the Botanical Bulletin, again called the attention of the botanical collectors to it, suggesting it might be found in the region of the original discovery. Acting upon this suggestion, Mr. Frank L Bassett, made a special journey to the locality, and after a long and weary search, was rewarded for his enterprise, toil and energy, by re-discovering it. Perhaps some reader of the CANADIAN HORTICULTURIST may be able to report better success with it. I venture to suggest that the Horticultural journal in the April number of each year give some information for the benefit of amateurs how to cultivate the various plants and trees sent to subscribers, with regard to soil, sunlight, shade, etc., for I have known some persons who were in the habit of watering all plants alike, giving the same quantity to a cactus as to an oleander and then wondering what was the matter with the cactus.

A. WILLIAMSON,  
Kingston.

L. Woolveeton, M. A., Secretary Horticultural Journal.

In reply we would advise our correspondent not to cut back *Rosa rubifolia* as he does the hybrid perpetuals, as it is not so vigorous a grower. Its habit is rather that of the Sweet Briar, and its bloom is single like the latter. This rose is grown more on account of its red foliage than for its flower which is not conspicuous.

The Caragana should begin blooming now. On the 25th June we saw specimens in bloom at Guelph, which were probably not much older than the tree mentioned by our correspondent.



## \* Open Letters. \*

### Fruits Not Barred Out.

SIR,—In an article in your late issue under the heading "Fruit Not Barred Out," we are informed that the Minister of Agriculture declines to prohibit the importation of fruit from the United States on the ground that "Manitoba would be deprived of such luxuries as shipping to Manitoba from Ontario or British Columbia would be impracticable, at the same time Manitoba must depend on California for her fresh fruits." Now I think a more silly argument could not be advanced on any subject. Is not California a greater distance from Manitoba than either Ontario or British Columbia. And further, they not only ship from California to Manitoba but California fruit is shipped to Montreal and even to England and that during periods when our fruits are rotting in the orchards for want of a market. The fact is California cuts us out of the markets of our own country with fruit not nearly in quality to our own simply because they can put them in the market before ours are ripe and then receives a better price than we would be thankful for.

From the fact that there is more danger of scale and disease being brought into the country through importation of fruit than through the importation of trees, I am convinced that the prohibition of trees by the Minister of Agriculture is for the purpose of benefitting nursery men rather than for stamping out the scale.

S. MORNINGSTAR, *Goderich.*

### Notes From Simcoe County.

SIR,—All the experimental stock has come through the winter in good shape, and a number of the trees are showing considerable bloom, so if no heavy frosts or other mishap occurs, we will have quite a variety of fruits this year. The following varieties are now in full bloom May 20th. Plums, Early Botan, Moldavka, Guei, Hudson River, Black Diamond, Union Purple. Cherries, Ostheim Russian, 207. The Russian Apricot Alexis is now in full bloom also.

Ten other varieties of plums and about the same of cherries are showing bloom.

The Princess Louise Apple, three years planted, is full of bloom.

As to the general outlook for fruit at present Winter Apples are with few exceptions showing a moderate amount of bloom. Early apples are very full. All kinds of stone fruits show immense quantity of bloom.

I used the full Bordeaux mixture this spring for first spraying when buds were swelling, and I think it is all right for the first as well as the second. I sprayed trees both young and old, currants and raspberries. It pays to spray young trees as well as those of bearing age.

G. C. CASTON.

### The Barry Pear.

SIR,—By express I have sent you to-day three good specimens of the Patrick Barry Pear, grown in California. They were shipped here last fall and have been in a uniform temperature of 35 degrees. I could have sent you some of this variety *fully one third larger*, but they were badly packed and had discolored in spots.

This pear is a wonderful keeper. I never have found one of them decayed at the core. It is best when it is little more than a sack of juice. Its size, shape and rich orange russet color when ripe, combined with its superb refreshing, sub-acid flavor and keeping qualities, entitles it to high rank among pears. The dealer of whom I bought them is selling them at the corner of Wall and William street at 10 cents each, or three for 25 cents. On the same fruit stand, were *extra fine* navel oranges from California, selling at six for 25 cents, and six extra fine bananas for ten cents.

This pear, can be shipped if carefully selected and packed, from Ontario to any market in the world, and delivered in prime condition. We have visiting us at this time some friends from Berlin, Germany. They tell us that good fruit is rare there, and *very expensive*. It is a very wealthy city, and if the Ontario fruit growers will unite and erect there a cold storage warehouse, and establish an agency for the distribution of their fruit through other German cities, they will find a larger market than they now anticipate. Fruit can be sent there in the fall, placed in cold storage, and taken out and exposed for sale at pleasure; success will surely be attained, if brain, skill and integrity are united in production and distribution. What has been accomplished by Ontario cheese-makers can be attained by Ontario fruit growers. Prime cheese opened its own market, and prime fruit will do likewise. *Quality! quality!! quality!!!* Carefully selected and packed, will overcome all obstacles.

FRANCIS WAYLAND GLEN.

*Brooklyn.*

### Beet Sugar.

SIR,—Since writing you upon the beet sugar industry, the Secretary of Agriculture at Washington has made a report which contains information valuable to your readers, if they are interested in this rapidly-growing industry.

In 1897 there were nine beet sugar manufacturing in operation in the United States. They produced 90,491,670 pounds of sugar from beets raised upon 42,272 acres of land. It will be observed that the yield of sugar per acre averaged 2,140 pounds.

There will be eight more manufacturing

## THE CANADIAN HORTICULTURIST.

n operation this year, and the estimated product of sugar is 180,000,000, or an increase of 100 % over 1897.

In respect to physical conditions affecting the growth of the sugar beet in this country, the Secretary says that the best results were reported from New York and Michigan.

This official statement justifies my assertion, that the sugar beet can be successfully produced in Ontario, for conversion into sugar.

The manufactory at Rome, New York, produced first-class granulated sugar, and another manufactory will be in operation in the State this fall. The season is later at Rome

this spring than at London or Goderich, and closes earlier in the autumn.

Favorable reports have been received from Wisconsin, Minnesota and South Dakota. It is found that the belt of territory included between the limits of the isotherms of 71 and 69 degrees may be regarded as the basis belt of the beet sugar industry. The best results are obtained within, or north of this belt, other climatic conditions being favorable. The extreme northern limits of beet sugar culture are determined only by the advent of freezing weather. This is important information for Canadian agriculturists.

FRANCIS WAYLAND GLEN.

Brooklyn.

### \* Our Book Table. \*

**BRUNTON'S HARDY PLANT CLUB AND INTERNATIONAL EXCHANGE**, under the special care of Mr. Frank Brunton, importer and exporter of Nursery and Florist's stock, member Boston Horticultural Society, 136 Boylston Street, Boston, Mass.

**YEAR BOOK OF THE DEPARTMENT OF AGRICULTURE**, for the United States, 1897.

**REPORT OF THE EXPERIMENTAL FARMS OF CANADA, 1897.** Wm. Saunders, LL. D., Ottawa, director.

**GREENHOUSE MANAGEMENT.**—A manual for florists and flower lovers, on the forcing of flowers, vegetables and fruits in greenhouses, and the propagation and care of house plants, by L. R. Taft, professor of horticulture and landscape gardening, Michigan agricultural college, and author of *Greenhouse Construction*. Illustrated. 12mo, 400 pp, cloth. Price \$1.50 postpaid, Orange Judd company, New York.

This new work just published forms a companion or supplementary volume to *Greenhouse Construction* by the same author, although each of these books is complete in itself. The author has had unusual facilities for studying this entire subject practically as well as scientifically, and has here given the results not only of his own experience, but also those of many of the most skillful experts in their respective specialties.

It treats of all the plants commonly cultivated by florists and amateurs, and explains in a thorough manner the methods that have been found most successful in growing them. Particular attention is paid to the growing of cut flowers, entire chapters being devoted to each of the leading crops, such as roses, carnations, chrysanthemums, violets, bulbs, smilax, ferns, orchids, etc.

The growing of fruit under glass is attracting the attention of commercial florists as well as amateurs, and the reader will find separate chapters devoted to the forcing of grapes, strawberries, peaches and other fruits. The forcing of vegetables also receives the

attention it deserves, and the raising of lettuce, radishes, cucumbers, tomatoes, mushrooms, etc., is explained at length.

The care of house plants is also treated quite fully, with detailed directions for propagating, preparing the soil, potting, watering and every part of their proper management. A chapter is also given on bedding plants, as well as on ornamental grasses, flowering and foliage plants. Other chapters are devoted to the propagation of plants from seeds, cuttings, layers and by grafting and budding. Of special value to many will be the directions for treating plants when attacked by insects and fungi. The preparation of the soil, the use of various manures, composts and fertilizers, watering, ventilating, heating, and in fact every detail of the subject to which the work is devoted, receives careful and minute attention.

**MEEHAN'S MONTHLY**, devoted to General Gardening and Wild Flowers. Published by Thomas Meehan & Sons, Germantown, Phila., Pa. Price, \$2.00 per year; \$1.00 for six months in advance. Conducted by Thomas Meehan, formerly Editor of the "Gardeners' Monthly" and the "Native Flowers and Ferns of the United States." Vice-President of the Academy of Natural Sciences, and Botanist to the Penn State Board of Agriculture.

A feature that in itself makes the work a standard authority, is the series of colored lithographs, illustrating some native flower or fern, one of which is presented with each issue, and which are executed in the most expert and artistic manner by Prang, the famous art publisher. A text of two pages, of descriptive and historical compositions, accompanies each. This series is practically a continuation of the famous work commenced in the "Native Flowers and Ferns of the United States," which was discontinued at the death of the publisher, after 192 plates were issued.

Write *Thomas Meehan & Sons, Germantown, Philadelphia*, for a sample copy.