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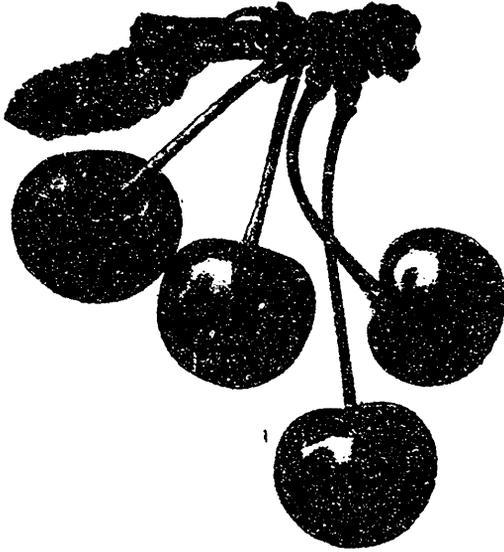
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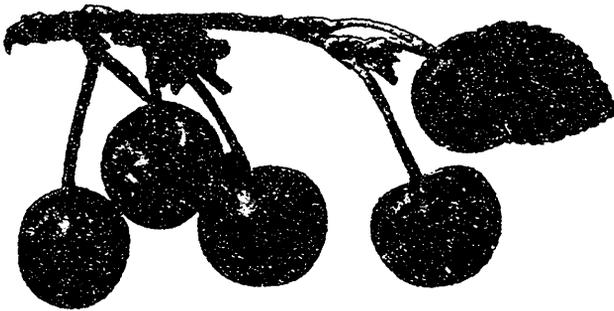
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MONTMORENCY.



EARLY RICHMOND.
KENTISH CHERRIES.

THE CANADIAN HORTICULTURIST.

VOL. XXII.

1899.

No. 8



KENTISH CHERRIES.



HE classification of cherries is very unsettled, and unsatisfactory, being founded too much upon form and color. The common American grouping is into I, Hearts and Bigarreaus, fruit heart-shaped, and II, Dukes and Morellos, fruit round, and III, Native Dwarf. But surely the Hearts and the Bigarreaus are sufficiently distinct for separate grouping, if only by reason of the difference in texture of the flesh, as for example the Tartarian (Heart) and Yellowish Spanish (Bigarreau). Again why class together the Dukes and the Morellos which are so totally distinct both in habit of trees and in fruit, as for example compare the May Duke, with its upright habit and fastigiate foliage, and very mildly acid fruit, with the English Morello, the fruit of which stains and is totally distinct in habit of tree and in flavor of fruit.

Then why should the Morello and the Kentish varieties be put together, when the fruit is so distinct in color, flavor

and texture. The former is well represented by the English Morello, and the latter by the Early Richmond and the Montmorency. It is of these two varieties we desire to speak more particularly at this time.

The EARLY RICHMOND is an American name taken no doubt from Richmond, Virginia, where it has been planted in early years, just as the Old English Williams Pear took on the name Bartlett, at Boston, from the first introducer. It is also called the *Virginian May*, although with us it does not color before the middle of June. It was not easy for a time to trace this variety to its identity in England and France, but from all we can learn it is the *Kentish Pie cherry* of England and the *Hative* (Early cherry) of France (Le Roy) The cherry appears to be of French origin, and George Lindley supposed that it had been brought into England from Flanders in the reign of Henry VIII.

The tree, like all the Kentish and Morello, is a slow grower and slender

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in branch, but very hardy, and productive in proportion to its size. Some trees five or six years old at Maplehurst produced about 30 quarts each, and since the trees may be planted about fifteen feet apart, the yield per acre would be excellent in a year like this.

The *fruit* is not large, as is shown by our engraving which is the natural size, but it is free from rot, and not very subject to curculio.

The form is almost round, though slightly flattened; the skin is uniformly of a bright clear red, becoming darker as it matures. The stem is slender, about one inch in length, often carrying the calyx, inserted in a good sized cavity. Apex set in a small indentation.

The *flesh* is very tender in texture, yellowish, with abundant uncolored juice, flavor quite acid, pit small.

Season, June 20th, to July 10th, (1899).

Quality, poor for desert, but 1st class for all culinary purposes.

Value, very good for market.

Adaptation, succeeds at all the stations

THE MONTMORENCY.—Of all the Kentish pie cherries this seems to us the most profitable. The tree is one of the most vigorous of its class, the fruit is large, and abundant. This and the Early Richmond cover the season very well, and are the two leading Kentish varieties for market. In France, this cherry has many synonyms, as for example *Montmorency a longue queue*, *Petit-Gobet*, etc.

Origin Montmorency valley in France in middle of 17th century.

Tree, healthy, fairly vigorous, very productive, and hardy.

Fruit attached in ones and twos, $\frac{3}{4}$ long by $\frac{7}{8}$ of an inch broad, roundish almost flattened at apex, skin bright shiny red becoming darker red at maturity, easily detached from the flesh; *stem* $1\frac{1}{2}$ inches long, in rather large cavity.

Flesh, salmon yellow, tender very juicy, sprightly acid.

Season, July 1st, to 10th in (1899).

Quality, very good for cooking.

Value, good for market.

Adaptation, general.

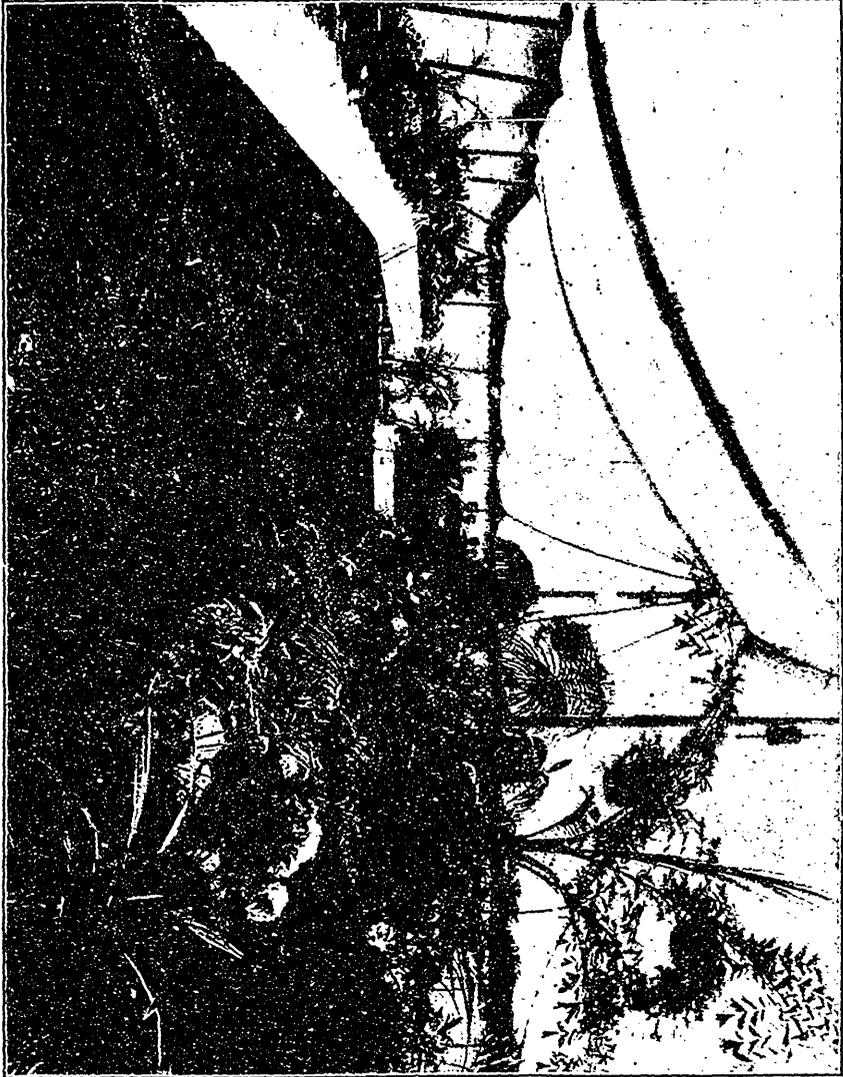
There are a good many other varieties of Kentish but the most common is the old Kentish Late which differs little from Montmorency except that it is smaller and less productive.

In our experimental collection we notice *Suda Hardy*, *Lutovka*, *Kings Amarelle* and *Spat Amarelle* all of which seem to ripen during a season covering the greater portion of the month of July. These are only two years planted, and are all bearing a few cherries each. The Early Richmond and the Montmorency are about twelve years planted and are carrying between 30 to 40 quarts each.

As the various kinds increase in size and age we shall be able to give our readers more definite information regarding their value.

TOMATOES.—An Exchange says: Market gardeners do not often give away their 'snaps,' but one confessed not long ago that he had led the market in early tomatoes for several years by following two rules. He plants in north and south rows, and lays the stalk horizontally in a shallow trench, leaning the plant to the north and covering all except the top of the plant. This plan lets the sun strike the ground over the roots and buried stalk and hastens fruiting. His other rule is never to cultivate in any way which would wound the roots after the blossom has appeared. When wounded the plant stops feeding the fruit until it has repaired the damage.

JUNE FLOWER SHOW, HAMILTON HORTICULTURAL SOCIETY.



HAMILTON ROSE SHOW.

THE exhibition held by the Hamilton Horticultural Society on June 21st, was a decided success. The display was first-class, the music excellent, the weather perfect and the attendance very good. In addition to the members several outside friends contributed fine specimens. Among the latter may be mentioned Mrs. Stuart, Inglewood; Mr. A. E. Alexander, Aberdeen Ave; Mr. Goodale, Asylum; Mr. Morgan, Florist; Dr. Russel, Asylum; Senator Sanford, Wesanford, and Mr. L. Woolverton, Grimsby.

The centre of the tent was occupied by a grand display of stove and greenhouse plants, among which were many magnificent specimens of hydrangeas, palms, pandanus, ferns, auracarias, cleriodendrons, ficus, coleus, fuschias, oleanders, sedums and amaryllis, exhibited by Dr. Russel, R. A. Lucas, Thos. Horn, M. Skedden, A. Alexander, W. Hunt, gardener for Mr. John Stuart; and S. Aylett, gardener for Senator Sanford.

A very neat and clean collection of anthuriums, palms and other stove and greenhouse plants shown by E. G. Brown, florist, surrounded the orchestra in the rear, while the side tables were taken up by cut roses and herbaceous blooms, fruits and smaller pot plants. The following, in addition to above named, received special mention from the Judge, Mr. Roderick Cameron, of Niagara Falls Park.

The order of mention is according to position occupied by exhibits.

CUT ROSES IN VASES.

Mr. J. J. Evel, 10 varieties.

Mr. B. E. Charlton, 10 varieties.

Mr. S. Briggs, 4 varieties.

Mr. H. J. Healy, Baron de Bonstetten.

Mr. Adam Brown, 2 varieties, shaded.

Mr. Wm. Hancock, Paul Neyron.

Mr. E. Fisher, T. H & B Ry., 9 vases.

Mr. Jas. Ogilvie, 16 varieties

Mr. A. E. Alexander, 16 varieties.

Mr. Wm. Hunt, Hybrid Teas.

Mr. Goodale, (gardener, Asylum for insane), a very large collection.

Webster Bros., a fine display of roses, paeonies, campanulas, delphiniums, aquilegias, cannas, etc.

Messrs. John Knox, W. F. Burton, Geo. G. Brower and James Ogilvie, beautiful baskets of roses.

Mrs. Stuart, Inglewood; collection of herbaceous cut-blooms.

W. F. Burton and John Knox, baskets of pinks, petunias and catalpas.

Mrs. Thos. Horn, beautiful boquets of white carnations and asparagus plumosus.

Mr. Morgan, florist, and Mr. James Ogilvie, collections of sweet williams, gaillardias, coreopsis, marguerites, etc.

Master Harry Tribe, a wonderful dahlia.

A. Alexander and W. C. Brennen, single and double tuberous begonias.

W. Hunt, S. Aylett and A. Alexander, adiantums and gloxinias.

Walter Holt, Florist, marguerites and delphiniums.

Mrs. Boyd, West Ave., amaryllis and oleander.

Mr. A. Alexander, arethusa bulbosa.

Mrs. Woodman, cocos, cactus and richardia.

W. T. Miller, rubber plant.

Mrs. Garson, ferns, palms and imantophyllum.

Jas. Anderson, stag-horn fern, rhododendron and orange, and last in the

HAMILTON ROSE SHOW.

floral line, but not least, a fine collection of cut roses, pentstemons and other blooms from Mr. L. Woolverton and Grimsby friends.

FRUITS AND VEGETABLES.

Geo. Wildes, cucumbers, very good.
Master Frank Gage, potatoes, would be creditable to Southern States.

Jas Patterson, cherries, strawberries, gooseberries and lettuce, very good.

Wm. Farrar, strawberries and cherries, very fine.

Geo. Wildes, strawberries and gooseberries, excellent.

Mr. Samuel Aylett filled the rather trying position of Superintendent to the satisfaction of all. Osler's orchestra furnished music during the afternoon and evening.

Mr. Wm. Hunt, gardener at Inglewood, exhibited some grand specimen adiantums at the Hamilton flower show. Many were indeed surprised to learn that they could be grown to such perfection.

J. M. DICKSON,
Sec.

COVER FOR BERRY WAGON.

IN handling berries it is important to keep them from the heat of the sun, and we found it difficult to get our fruit to market in good condition in an open wagon, and so last winter decided to build a cover. The accompanying illustration represents the plan which we adopted, and we have found it so convenient and beneficial that we would not be without it for many times the original cost, which was about \$7.

It has five $1\frac{1}{2}$ by $\frac{3}{4}$ in. bows which set into staples made of strap iron bolted to the sides of the box. A 2 in. rave is put on the outside with the lower edge just below the top of the box so as to carry the water over. From this rave the sides and front are boarded up 2 ft. with $\frac{3}{8}$ in. matched sheathing, on top of which is another 2 in. rave $\frac{1}{8}$ in. thick. The sides are covered with canvas the remainder of the way up.

The seat is set back in the center, leaving room for one row of crates in front, which makes them handy to get at and evens up the load. To support the seat an inch board is bolted to the inside of the bow with the lower edge resting on the top of the box.

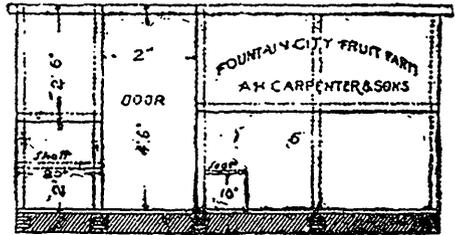


FIG. 1627.—OUTLINE OF BERRY WAGON.

The seat is 12 in. wide and is fastened with hinges at one end, so that it can be turned up out of the way when loading or unloading. The top is covered with $\frac{3}{8}$ in. matched sheathing the same as the sides. The top is well painted and then covered with canvas. The canvas on both sides and top was first sized with hot glue to fill up the cloth and then painted with white lead and oil with a very little lampblack to give it a drab color. This makes the canvas water-tight and keeps it from shrinking. In this wagon we can carry 50 crates and have them where we can easily get at them. When we wish to use the wagon without the top it can be set off out of the way. — American Agriculturist.



FIG. 1628.—CLIMBING HYDRANGEA.

THE CLIMBING HYDRANGEA.

(*Schizophraga hydrangeoides*).

WHEN visiting the floral exhibit of the Hamilton Horticultural Society last June, we also visited the garden of Mr. John Knox, a prominent member, who has several rarities on his grounds as for example, a variegated maple, a variegated ash, a double-flowering peach, etc. But, perhaps, the most remarkable of all, is a climbing hydrangea, which has covered half the front and a portion of the side of his brick residence. We do not know of another specimen of this plant in Canada; Mr. Cameron, of Niagara Falls Park, who was with us, valued it so highly that he said, "If it were mine, I would not take \$300 for that plant."

Our frontispiece shows this beautiful vine, as it appeared at the time just in full bloom, and showing off to best advantage. We also secured a photograph of one of the flower cymes, which will give our readers a fair idea of its manner of blooming.

It is a fine climber for old dead trunks of trees, and does equally well for wooden or stone buildings, throwing out aerial rootlets, which cling quite as tenaciously as the Japan Ivy. The leaves are opposite, five inches across, nearly round, and toothed. The flower cymes are from six to ten inches in diameter, and are composed mostly of fertile flowers which, however, do not fruit.

APPLES IN NORTH WESTERN ONTARIO.



FIG. 1629.—A MANITOBA DUCHESS APPLE TREE.

IT would appear that our visit to Sault Ste. Marie did not reach the extreme northern limit of the apple. At a meeting of the Western Horticultural Society in Winnipeg, in February last, a photograph was passed around showing a Duchess of Oldenburg apple tree, growing in the garden of Mr. W. L. Lyall, of Portage la Prairie, which had on it forty-five fine apples, and we are glad to be able to show our readers an engraving of the photograph. Mr. A. P. Stevenson, of Nelson, Manitoba, read a paper before the Society on "What the past year has

taught us," from which we take the following regarding apples.

"Our most prolific crop is the Transcendant, one tree alone yielding fully two barrels of apples. This is the first variety to bloom in spring; on that account there is some danger in certain localities of injury to the blossom by frost.

Mulching around the roots of the trees with half rotted straw, above the snow during winter, has been tried to retard in early blooming, but without any apparent advantage.

Sweet Busnett is the name of another variety deserving of special mention on account of its fair cooking qualities, very little crab flavor being noticeable. Ten varieties of Russian apple trees carried fruit to maturity last summer. Blushed Calville, a summer variety, bore rather better than a bushel of apples of good size and of fair dessert quality, and were ripe on the 25th August. A weakness of this variety, more noticeable than in previous years, was its tendency to drop its fruit with every high wind.

The following fall varieties also carried full crops of large to extra large apples, suitable for cooking purposes:—Lieby, Ostrekoff, Silken Leaf, and Russian Gravenstein. The latter variety is, in quality, size, coloring and appearance, second to none of our eastern

grown apples. One of the lessons learned among the apple trees the past summer is from the flat headed apple tree borer. Their work was first noticed last fall, when they worked considerable damage. They are detected by the borings or sawdust-like castings found at the root of the tree. When this is noticed the parts should be cut into with a knife until the borer is found.

Three years ago the first attempt at top-working the large apple on the crabapple was tried. So far as noted it has been a success. A number of the scions first inserted bearing heavily the past summer. The benefit of this work consists in the fact that top-working a half hardy scion on a hardy stock increases the hardiness of the scion. Such varieties of crabapple trees as Transcendant, Hyslop, Sweet Russet and Virginia, are congenial stocks, and make a firm union with the large apple.

Fortunately, we have now included among our fruit testing stations the Government pioneer farm at Dryden, and have forwarded them a good col-

lection of hardy trees of various fruits, and we hope the results may be helpful to our friends in Southern Manitoba.

THE PEACH CURL.



FIG. 1630.—TREATED LEAF.

THE nature of this fungus and its life history, has been several times fully described in these pages, but it remains to instance another clear case of successful treatment of it by spraying. Mr. W. M. Orr, in 1898, was the first in Canada to try white-washing his peach trees in winter season with a view of preventing the curl. His success was very marked, and was given to the public in his annual report.

This spring, Mr. A. H. Pettit, of Grimsby, sprayed his large peach orchard, first in February, and then again in March, using for first application one peck of lime to 40 gallons Bordeaux mixture, and the second time, one half bushel. One row right through the orchard was left unsprayed

—embracing nearly every variety. As the growth began the result became more and more apparent, every other row being free from curl leaf except the one unsprayed, on which the foliage was very considerably affected and the ground beneath was strewed with dead leaves, while under the others none could be seen. Numerous visitors studied effects of the treatment and were convinced of its effectiveness, and believe that, had the season being a wet one, the difference between the treated and the untreated trees would have been still more marked. Our engravings are taken from the leaves of the treated (fig. 1630.) and untreated (fig 1631.) trees.



FIG. 1631.—UNTREATED LEAF.

APPLE INSPECTION AGAIN.

THIS is a perplexing question, and no wonder we get so many opinions concerning its practicability. Parker* of Berwick, N.S., says "This is a question that has engaged the attention of this (N.S.) Association more or less for ten years, and is yet unsolved." In his paper before the Society he proposes XXX to denote the standard grade, to include "only perfect fruit, well developed, averaging in size, good in color, sound, free from blemishes such as rot, bruise or spot, possessing its own variety. The second quality "he says" shall be known as XX grade, which shall consist of good, well natured sound fruit, not worm eaten, though in size, form and color, it may fall below the standard grade" A grade above XXX he would denote as extra XXX.

These grades closely correspond with the grades proposed by us, under different marks our A No. 1 corresponding with his XXX; No. 1 to his XX, and extra A No. 1 to his extra XXX. We think the marks we propose better because such marks as XXX have been so much abused, and the use of the grade marks proposed by us will not prevent any packer adding as many X's or other private marks as he chooses in addition.

So far then we all practically agree, but the President of the Nova Scotia Association objects to a minimum specific size for each grade, as applied to all varieties. He thinks No. 1 Spy and No. 1 Fameuse would be quite different True, but should *any* apple be called No. 1 that falls below $2\frac{1}{4}$ inches in diameter? And if no Crab, Lady apple or Swazie Pomme Grise would ever reach grade A No. 1, $2\frac{3}{4}$ inches in diameter, why not denote its excellencies

with X's or some other special mark as is done at present? It would be very easy to make exception in the case of the three or four varieties to which the proposed grade sizes would not apply.

However, we might possibly yield in this, providing it be a rule to add a size mark to the grade mark, so that the buyer may know what he is buying. This would accomplish the same purpose, viz., of preventing fraudulent packing, giving a basis for inspection; and it would enable a distant buyer to purchase with confidence at a given price. Already for example, the writer has made a contract with an English buyer for a shipment of Northern Spys in this way, making certain prices for apples $2\frac{1}{4}$ inches in diameter or over, and a higher price for those $2\frac{3}{4}$ inches or over in diameter.

There is no difficulty in sizing apples for if it is not convenient to use a Wartman grader, which is the first Canadian machine for sizing apples, one can get a number of sheets of heavy card board, and have holes of various diameters cut in the same. All apples that will *not* go through a $2\frac{1}{4}$ inch hole, for example, would go for size $2\frac{1}{4}$ or upwards.

We have just received from Ottawa some copies of the general inspection act, and find that sections 109 and 110 refer to apples, but in a way that makes the provisions quite a dead letter. The following is the text:—

FROM GENERAL INSPECTION ACT.

7. The said Act is hereby further amended by adding the following sections thereto:—

"APPLES.

109. In the inspection of closed packages of apples, the inspector shall open not less than one package in every five; and if the manner of packing is found to be fraudulent

See report N.S., F.G.A. Association 1899, p. 121.

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or unfair, then he shall open all the packages put up by the shipper of such package :

"2. Every package found to be fairly and properly packed he shall brand as 'No. 1 Inspected Canadian Apples,' or 'No. 2 Inspected Canadian Apples,' as the case may be, if fit to be so branded :

"3. The inspector shall also examine the varieties of apples submitted for inspection, and shall correct the nomenclature if incorrectly marked or if the name of the variety is not marked he shall cause it to be marked on the package :

"4. The inspector may charge a fee of ten cents for each package inspected by him, and such charge shall cover the cost of opening and closing the package.

"10. No. 1 inspected Canadian apples shall consist of well-grown specimens of one variety, of nearly uniform size, of good color, sound, free from scab, worm-holes and bruises, and properly packed.

"2. No. 2 inspected Canadian apples shall consist of specimens of one variety, reasonably free from the defects mentioned in class No. 1, but which, on account of inequality of size, lack of color, or other defects, could not be included in that class."

We propose that this be amended somewhat as follows :—

APPLES.

109. The Inspector, appointed for that purpose, shall have power to open any closed packages of apples intended for sale in home markets or for export, which are marked No. 1, A No. 1 or

Extra A No. 1, and if, on examining one barrel in every ten of the lot being forwarded by any shipper, he finds them fraudulently packed, he shall have power to erase the grade marks, and to expose the name of the offender.

Every shipper of closed packages of apples is required to place his name and address either upon the inside or the outside of the same, and the inspector may detain from shipment, at the cost of the owner, any packages not so marked.

110. No. 1 grade of Canadian apples shall consist of well grown specimens of one variety of nearly uniform size, sound, reasonably free from scab, worm holes and bruises, properly packed and having a brand (marked on the head) showing the minimum size of the fruit contained.

2. A No. 1 Canadian apples shall consist of specimens of one variety, of fairly uniform size, of good color, sound and free from scab, worm holes and bruises and properly packed, and having the minimum size marked at the head along with the grade mark.

THE BLACK CURRANT.

THE fruit of the black currant is very valuable in its season, although the skin of the fruit contains essential oil—which renders it disagreeable to many persons—still the fruit is in much request for preserving and making wine. On the whole black currants are important objects of cultivation, especially in the neighborhood of towns, where the fruit, during the long period of season in which it is fit for use, is always in demand, and generally pays well for good cultivation. Having noticed quite recently in many districts of Shropshire the bushes of the

black currant suffering from want of moisture, and unless supplied by rain or by hand (artificially), the fruit will be small and consequently will be more acid. My practical advice to those who would like to grow the fruit of the black currant well, and get the fruit large and good, is to mulch with long stable or farmyard manure, putting it over the top soil over the roots, and then water with pond or other water that has been exposed to sun heat, giving each bush or tree sufficient to moisten all the roots of the tree operated upon, say ten or twenty gallons.

MELONS AND THEIR CULTURE.

THE melon belongs to the order *Cucurbitaceæ* of which there are over three hundred species, most of which have long slender vines and tendrils by means of which they climb, but some have neither vines nor tendrils, and are buncy and bush-like in appearance,

"The melon is an annual with palmately lobed leaves, and bears tendrils. It is monœcious, having male and female flowers on the same plant. The flowers have deeply five-lobed campanulated coroleas and three stamens. Naudin a French botanist observed, that in some varieties (e. g. of Cantaloups) fertile stamens sometimes occur in the female flowers."

It is a native of the South of Asia. It is found growing wild from the foot of the Himalayas down South to Cape Comorin, but is now cultivated in the temperate and warm regions of the whole world. It is excessively variable both in diversity of foliage and habit, but much more so in the fruit, which in some varieties is no larger than an olive, while in others it rivals the ponderous fruits of the gourd (*Cucurbita Maxima*). The fruit may be globular, ovoid, spindle-shaped, or serpent-like, netted or smooth skinned, ribbed or furrowed, various coloured externally, with white, green, or orange flesh when ripe, scented or scentless, sweet or insipid, bitter or even nauseous. Hence it is said to be "a most polymorphic species." It embraces all the numerous varieties of pumpkin, squash, vegetable marrow, gourds and melons.

Cucurbitaceæ embraces many varieties which are used in medicine; and chief among these is the *Colocynth*

gourd, about the size of an orange, or as it is sometimes called, bitter apple, or bitter cucumber. The *Colocynth* of commerce is made from the dried pulp of that gourd, which is grown in Asia, Africa and Spain—the latter place supplying the largest quantity to the trade.

The species, Melon, of which we would speak is not a disagreeable medicine, but a delightful fruit, which is used in large quantities in nearly all warm countries, and grown as an expensive luxury by artificial means in the colder portions of our earth.

As already stated it came originally from Asia. It is supposed to have been brought from there to Rome in the 16th century. The origin of some of the chief modern races, such as the Cantaloup, etc., and probably the netted sorts is due to Persia and the neighboring Caucasian regions. It is supposed to have been brought to America by Columbus—so it should have become pretty well naturalized during these four hundred years. The date of its cultivation goes away back almost to pre historic times. It was one of the good things of Egypt for which the Israelites mourned in the wilderness. About 3400 years ago they said:—"We remember the cucumbers and the melons."

The melons raised in this country are chiefly of two kinds musk and Water melons with many sub-varieties of these. Probably the latter is more largely grown, because of its good keeping and shipping qualities; and certainly it is cooling and refreshing during the warm weather.

But we shall chiefly treat of the cultivation of the Musk melon as it is by far the finer of the two and perhaps

somewhat more difficult to grow to perfection.

SOIL AND PREPARATION.

The soil best adapted for their growth is a rich gravelly loam, or warm rich sandy soil with a well drained, or dry sub-soil.

It must be made very rich—no fear of the ground being too rich, if the manure used be not too hot or fiery. In the fall, dig into your land a large quantity of strong cow manure, or better still, if you are where you can get it, manure from a hog pen. In the following spring dig your melon plot over again, say about the end of April. Then in May prepare for sowing. There are two ways of planting followed—one, in hills, and the other in rows. I prefer the row system because in that way you can have manure more evenly distributed under the plants.

Dig good deep trenches about seven feet apart, throwing the earth out to each side. Then fill into these trenches a large quantity of good horse manure mixed with old leaves. Throw on some soil and mix all with a fork. This will prevent the fermentation being too rapid, and by this means the bottom heat will be continued for a longer time, etc. Put a little finely pulverized guano or hen manure on top, and fill in earth on top of this about $4\frac{1}{2}$ inches deep and make all fine and smooth with a rake. Your row will then be slightly higher than the level of the ground.

Sow your seed along the center of this drill, or row, about one inch deep, and about two inches apart. Don't sow too soon, as melons are very easily injured by frost. Wait till you see the leaves pretty well started on the trees, which of course will vary with the season, but will generally give a most reliable indication of the advancement of vegetation.

When your plants are up, look out for cut worms and other pests. When your plants have become strong, with five or six leaves, and are past the danger of worms, thin out, leaving the best plants about 15 inches apart. Then carefully remove the dry earth from about the stems and bring up some fresh moist earth from the sides and put this round the plants right up to the leaves, making up the row from both sides about 4 feet in width—a little lower at the plants than out from them—leaving the surface pretty rough. Keep down weeds, and water occasionally if the weather be very dry.

When the vines begin to run, nip off the main vine, as it seldom bears any fruit, and the strength of the plant will be thrown into the fruit-bearing vines.

When the runners stretch out, the roughness on the surface will help to steady them. Don't let them get twisted about, and turned over with the wind, better steady them with little pegs till they are long enough to reach out their little tendrils and take hold on each other with these wonderful hands. Keep the vines so spread that they will evenly cover the ground, and not be thick in some spots and thin in others.

Your plot of melons should be so situated as to get the sun all day. They will do even better if the land slopes towards the west, so that the soil will be well warmed by the evening sun, and so remain warm well on throughout the night.

RIPENESS

When the musk melon is ripe the rich fragrance of the fruit will generally give warning, and generally the color changes, (but not always) and the stem will crack around where it joins the fruit, and the fruit will separate quite easily from the stem.

SIZE OF THE APPLE BARREL.

In regard to water melons none of these marks will *apply*. For it does not change color, become fragrant, nor separate any more easily from the stem. How then can you tell? By two very small things which are frequently overlooked, if you look closely where the fruit stem joins the vine you will see a very small leaf, not more than half an inch in length, and a small tendril just like what grows on other parts of the vine. When this little leaf and tendril

dry right up then the melon is ripe and fit for the table.

All melons are better to be fully ripened on the vine. For lack of attending to this, many a tough insipid customer has to be dealt with that ought to have been free and luscious.

I have not treated of transplanting melon plants for I find that they do better to be sown just where they are to grow, etc.—A. McLaren, before Hamilton Horticultural Society.

SIZE OF THE APPLE BARREL.

THESE are several sizes of apple barrels in use in the United States and Canada, and it is certainly most desirable that uniformity be attained in this regard. The National Apple-Shippers Association of the United States have adopted the following size barrel, and have resolved not to buy or ship in any other: Head, $17\frac{1}{8}$ inches; croe to croe, inside, $28\frac{1}{2}$ inches; bilge, 64 inches, outside. This is about the same as our flour barrel, so much used in Western Ontario, but much larger than the usual apple barrel of New York State, and larger than the legal barrel of Ontario. The amendment to the Weights and Measures Act of Canada, as now proposed, provides slightly different measurements, but giving cubic

contents nearly the same. The following is the proposed text:

1. On and after the _____ day of _____ one thousand eight hundred and ninety-_____, section 18 of the *Weights and Measures Act*, chapter 104 of the Revised Statutes, shall be repealed and the following shall be substituted therefor:

“18. All apples packed in Canada for sale by the barrel shall be packed either in cylindrical veneer barrels having an inside diameter of eighteen inches and one-third, and twenty-seven inches from head to head inside measure, or in good and strong barrels of seasoned wood twenty-seven inches between the heads, inside measure, and having a head diameter of seventeen inches and a middle diameter of nineteen inches, and such last-named barrels shall be sufficiently hooped, with a lining hoop within the chimes, the whole well secured with nails.

“2. Every person who exposes for sale, or who packs for exportation, apples by the barrel, otherwise than in accordance with the foregoing provisions of this section, shall be liable to a penalty of twenty-five cents for each barrel of apples so offered or exposed for sale or packed.”

BLUE ROSES GROWN IN BULGARIA. The blue rose, which, with the black, has so long been a subject of horticultural research, has quite unexpectedly made its appearance in a continental garden. Kilanlik, in Bulgaria, whence the rarity is reported, is a district renowned for its attar of roses and conse-

quently the flowers are grown on a very large scale. Samples of the soil where this rare plant is grown have been sent to the chemical laboratory of Sofia to be minutely analysed. It is known to be rich in lime, ammoniac, salts of copper and oxide of iron.

THE ART OF PROPAGATING.

BUDDING performs the same duty that grafting does, the one done in Winter or Spring before the young buds have started, while the other is reversed, and can be done only when the subject is in a growing state, so that the bark peels readily from the wood.

Budding, as the name imports, is the insertion of a bud of one kind of tree into the bark of another. It is an expeditious way of increasing any improved variety of fruit to an almost unlimited extent, as every bud from growing shoots is, as it were, available, from which an independent plant can be grown. In this respect, it is similar to raising plants from cuttings, where, in many things, every eye may be made to produce a new plant. Grafting has to have two or more buds.

Without one or other of these methods, there is but one way of increasing many kinds of fruit, that of layering. Hence, were it not for the methods of increase, fruit of improved kinds would be exceedingly scarce, whereas, by its means, any new apple, peach, pear, or the like, may be increased very rapidly.

In the old country much is done by budding or grafting in raising ornamental trees, roses, and other shrubs, and to a more limited extent by the nurserymen of this country. Even the florists find it to their interest to grow many kinds of roses this way now, as some fine kinds appear to do better budded or grafted on another kind as a stock.

Sometimes the object sought is to dwarf the growth, as for example, an ordinary apple worked on to a Paradise stock, itself a small growing kind, dwarfs the growth down to an ordinary sized bush; so with pear on quince.

In other cases very superior fruits or



FIG. 1632.—BUDDING.

flowers are sometimes of weakly growth; these worked on to the wilding of its kind increases its vigor, but preserves the character of the fruit.

In the apple, pear and peach, the stock usually used is the produce of the respective fruits raised from seed. In the rose in Europe, the common dog rose, Manetti and other strong growers is the general stock. Any person having a vigorous climbing rose of the Queen of Prairie, can easily inoculate it by inserting buds of other choice kinds of rose.

The Time to Bud is when the bark will peel from the stock, and is in a half ripe state, the sort from which the bud is obtained being also in the same condition, the bud itself being fairly formed and plump and round in appearance. If budded early in the season, some things will push the bud into growth at once. The general practice is to bud so that the bud remains dormant until Spring, so that the bark will peel freely. Secondly a proper time; not too early, when there is a little cambium, or mucilaginous cement between the bark and the wood, for the adhesion of the bud,—nor too late, when the bark will

EXPERIMENTS IN ENGLAND WITH COLD STORAGE.

not peel freely, nor the subsequent growth sufficiently cement the buds to the stock. Thirdly, buds sufficiently mature. Fourthly, a keen, flat knife, for shaving off the bud, that it may lie close in contact upon the wood of the stock. Fifthly, the application of a ligature with moderate pressure, causing the bud to fit the stock closely.

The stock and bud being in a vigorous growth, and in condition, an incision is made lengthwise through the bark of the stock at the right angles, forming the letter T. A bud is then taken from a shoot—each leaf having been cut a short distance above the bud as shown in our illustration. (Fig. 1633.) The bud is shaved off the scion an inch or inch and a half in length—with a small part of the wood directly beneath the bud. This wood is left in by the best budders in this country, but removed in the old—but their moist climate favors this better than ours. The edges of the bark are then raised a little and the bud pushed downwards under the bark. A bandage of bass, soft string or other substance is wrapped around, covering all but the bud.

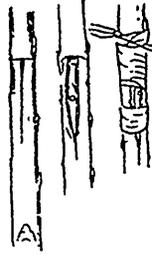


FIG. 1633.

Rosarians generally use woolen yarn for string, as less likely to cut and wound the tender shoots. To prevent the bud drying up the leaf is cut, leaving but little exposed to wither—which would be fatal. Usually in ten days to two weeks the junction is sufficiently formed to sever the bandage. When in vigorous growth, if this is not attended to, the tie is apt to cut into the stock. An examination will readily show if the junction is formed, or if the ligature is cutting into the stock. (See Fig. 1632.)

If everything is in shape, in the Spring the stock is cut off a couple of inches above the inserted bud. This causes the bud to push. If on young stock, no other bud is to be allowed to grow, itself finally forming the tree or bush. If it is a fancy of inserting another kind into a growing bush or tree, then that particular branch will have to be given up to the new comer. —Prairie Farmer.

EXPERIMENTS IN ENGLAND WITH COLD STORAGE.

INTERESTING results have been attained from the observations of W. P. Wright, Superintendent of Horticulture of Kent County, on the cold storage experiments for fruits at the works of J. & E. Hall, Dartford, England. The cold chambers were fitted with brine walls and cooled to any desired temperature by means of carbonic anhydride machines.

The fruit being placed upon tiers of galvanized wire shelves under three different conditions.

1. Exposed on the shelves.
2. Enveloped in grease-proof paper.
3. Surrounded or covered by cotton wool.

It was found that strawberries can be kept for three weeks in a temperature of 30°, but it was necessary to surround the fruit with cotton wool, or in the case of fruit in sieves, to place a pad of that material over the top. Without this precaution the fruit became dull and lost the fresh, marketable appearance, although perfectly sound.

THE CANADIAN HORTICULTURIST.

Black currants shriveled after ten days' storage, but filled up and freshened when again exposed to ordinary temperature. The best temperature for this fruit proved to be 32°. Red currants remained sound for six weeks and retained their freshness for 16 hours after being taken out of the refrigerator. This fruit seemed to be best in a temperature of from 32° to 36°, and covered by paper to shut off currents of air. Cherries kept sound, fresh and clear for four weeks in a temperature of 30° when covered with wool. After that the fruit began to shrivel.

With all these fruits it was found that the best results were obtained when they were placed in storage in advance of dead ripeness. They should not be injured in any way.

The apples and pears tested were of the English variety, so that a description of these tests would not be of much value to American growers. The severest tests were of the early market varieties which would not keep under ordinary conditions of storage. Sound fruit of this sort generally came out in nearly perfect condition in February. The apples were divided in three different chambers, kept at 30°, 32° and 36° respectively. The lowest temperature did not prove harmful nor was any advantage derived from it. Of the dozen different varieties tested, 36° seemed to be the most suitable. Little difference was found whether the fruits were exposed, covered with cotton wool or grease-proof paper. The best result

was from fruit not fully ripe and not bruised.

A dozen varieties of pears were tested, among them the Williams of England or the Bartlett of the United States. All kept satisfactorily, there being little choice between 30°, 32° and 36°. If anything a lower temperature for pears is better than for apples, although for all practical purposes the two fruits agree.

The plums of England and the United States are so much alike that the tests will be interesting here. Green gages kept sound for ten weeks, proving to be the hardiest variety. The popular plum of England, Victoria, remains sound nine weeks; the Golden Drop stood the test for eight weeks. The best temperature was found to be from 32° to 36°, although the plum does not do as well as other fruits in cold storage.

The tomato experiments were not completely successful, but the best temperature was found to be 36°.

Grapes covered with grease-proof paper stood the test for nine or ten weeks at a temperature of 32°.

The peach trials were rather conflicting, some remaining sound for two months at 32°, one variety rotting at 36°.

Mr. Wright says that cold storage for fruit growers on a small scale would not pay, but that the future probably would see in all large market centres chambers provided in warehouses for fruit.—Cold Storage.

AMMONIA FOR HOUSE PLANTS.—It is simply astonishing that amateurs succeed as well as they do with house plants, when they are so neglectful of fertilizing the soil. The simplest fertilizer for increasing the growth of plants is the household ammonia, which every

housekeeper keeps at hand for kitchen or bedroom uses. For the plants add three drops to a cup of water, and use to water the plants about twice a week. For a larger quantity twelve or fifteen drops to a quart of water.

STOCKS FOR BUDDING.

 **C**HERRIES are generally worked on Mazzard stocks. All varieties are readily worked upon it. When dwarf trees are desired the Mahaleb is used as a stock. This stock, which is imported, is adapted to heavy clay soils. *Prunus Pennsylvania* and *Prunus pumila* have been used to some extent. The former is the common wild red, pin or bird cherry; the latter the dwarf or sand cherry. Cherry stocks are worked both by budding or grafting. Budding is the common method. The stocks should be in condition to work the season they are transplanted, the second summer from the seed. Any that are too small for working may be allowed to stand until the following year. In the West, where great hardiness is required, the varieties are crown-grafted on Mazzard stocks in winter. Yearling stocks are used and the scions are from six to ten inches long. When planted, only the top bud should be left above the ground. The scions produce trees on their own roots.

The budding season for pears usually begins late in July or early in August in the North. If the stocks are small they may stand over winter and be budded the second year. Pear trees do not succeed well when root grafted, except when a long scion is used for the purpose of securing own-rooted trees. Dormant buds of the pear may be used upon large stocks early in spring, as upon the apple, and buds may be kept upon ice for use in early summer. Pears are dwarfed by budding them upon the quince. The Angers quince is the best stock. The pear can also be grown upon the apple, thorn and Mountain ash.

Plums are worked in various ways, but ordinary shield-budding is usually employed in late summer or early fall, as for peaches and cherries. In the

North and East the common plum is usually worked upon stocks of the same species. The Horse plum is a common stock. St. Julien and Black Damas are French stocks in common use. The Myrobolan is much used in California for standards, but in the East it makes dwarf trees. Plums are sometimes worked upon peach, almond and apricot stocks, according to locality. Japanese plums are worked upon peach, common plum or natives, preferably Marianna. *Prunus Simoni* works upon peach, common plum, Myrobolan and Marianna.

The peach is perhaps the easiest to propagate of all northern fruit trees. Peach trees are always shield-budded. Grafting can be done, but as budding is so easily performed, there is no occasion for it. The peach shoots are so pithy that in making scions it is well to leave a portion of the old wood upon the lower end to give the scion strength. Peaches are nearly always worked upon peaches in this country. Plums are occasionally employed for damp and strong soils. Myrobolan is sometimes used, but it cannot be recommended. All plums dwarf the peach more or less. The hard-shell almond is a good stock for very light and dry soils. The Peento and similar peaches are worked upon common peach stocks.

Apple stocks are either grafted or budded. Root-grafting is the most common, especially in the West where long scions are used in order to secure own-rooted trees. Budding is gaining in favor eastward and southward. It is performed during August and early September in the Northern States, or may be begun on strong stocks in July by using buds which have been kept on ice. Stocks should be strong enough to be budded the year they are transplanted. — Prof. Bailey in *American Gardening*.

THE NEW PEACH SCALE.

(*Diaspis amygdali* Tryon).

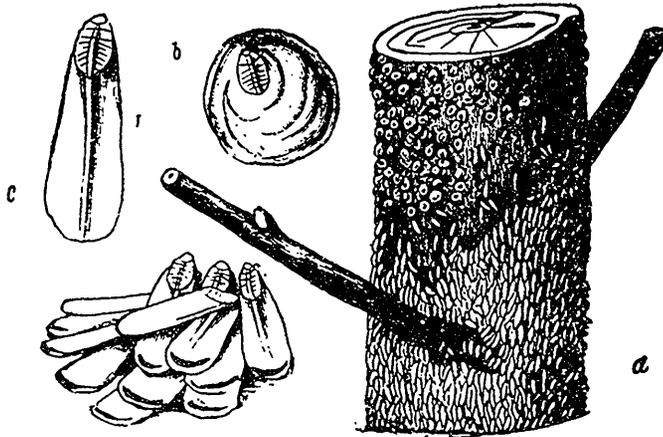


FIG. 1634.—PEACH SCALE, C MALE, B FEMALE.

How to detect it.—This scale is readily distinguished from the San José in that the female is a little larger, of a lighter gray color, with the elongated exuvial point ridged and located at one side of the centre, and the male is smaller, elongated, with parallel sides and white. The exuvial point is similar to that of the female, but located at the anterior end. A tree badly infested has a white-washed appearance from the color of the male scales. Where only females occur, however, a grayish brown appearance is produced.

It is the habit of these insects to cluster about the trunk and the lower parts of the larger limbs of a tree.

The original home of this insect is probably either the West Indies or Japan. From its probable West Indian origin it gets one of its popular names, "West India" scale. It is now known to exist in the United States, at Washington, D. C.; at Los Angeles, Cal.; in one locality in Ohio; at Molina, Fla.; at Bainbridge, Thomasville, Irby and Ashburn, Georgia. The case at Irby,

Ga., involves two peach orchards; one of about 7,000 trees and the other 25,000 trees. About 10,000 trees have been utterly destroyed at this place by this scale.

It attacks the plum, peach, apricot, cherry, pear, grape, persimmon, and a few other plants.

Treatment.—The winter treatment for this insect is about the same as that for the San José scale. The females pass the winter in the mature and partially mature state, and can be killed by the twenty per cent. mixture of kerosene and water, or by the whale-oil soap treatment at the rate of one pound dissolved in one gallon of water. In Georgia there are three or four broods from eggs, which appear at more or less regular intervals, the first appearing about the middle of March, if the season is favorable. These broods should be watched for and ten per cent. kerosene or whale-oil soap at the rate of one pound to four gallons of water should be applied at the time of their appearance.—Georgia Entomological Bulletin, No. 1.



Flower Garden and Lawn. ❀

“OUR GARDENS.”*

THIS new book by Dean Hole, on “Our Gardens,” is a charming work. Printed on the best of paper, in faultless letterpress, illustrated by elegant and costly colored garden scenes, it captivates the lover of the beautiful in nature the moment he opens it.

The book combines in a wonderful way the amenities of the garden with the latest information on gardening and landscape art. Some of the headings of chapters will show what may be expected in the book by our readers: Ch. v, On the formation of a garden; ch. vi, The component parts of a garden; ch. vii, The herbaceous border; ch. viii, The rose garden; ch. ix, The rock garden; ch. x, The water garden; ch. xi, The wild garden; ch. xii, The town garden.

The following selections from chapter v, on “The formation of a garden,” will interest our readers and give a fair idea of the style of the writer:

“There was a time when the architect was an obtrusive and persistent poacher; when, not content with his edifices of brick and stone, his terraces, pagodas, colonnades and cupolas, urns and tubs in front of his houses, he in-

sisted on a repetition of walls, towers, domes, and spires done elsewhere in evergreen shrubs: and when it was written by one of the brotherhood that he should not trouble his readers with any curious rules for shaping and fashioning of a garden or orchard, how long, broad, or high the beds, hedges, or borders should be contrived, every drawer, embroiderer—nay, almost every dancing-master, may pretend to such niceties, in regard that they call for very small invention and less learning. Now we shall be justified in associating such an utterance with ‘an out-patient of a lunatic asylum’ (the description given to me many years ago, by a sarcastic rural policeman, of a neighbor whom he despised), but then, when the gardeners themselves followed the same straight lines in their walks, copied the same fantastic forms in their knots and beds, which squirmed and wriggled like the poor worm pricked by the hook, when they mutilated vegetation, and gloried in their shame, there was too much truth in the satire. The garden was regarded as a mere appendage to the house, and it was a condescension and work of supererogation on the part of the architect to superintend its formation.”

*By S. Reynolds Hole, author of “A Book about Roses,” “Memories of Dean Hole,” etc. London. J. M. Dent & Co.; New York, McMillan & Co. Price \$3.00.

THE CANADIAN HORTICULTURIST.

"The idea of superiority is not extinct. I have heard complaints from builders that we gardeners trespass upon their work, and disfigure it with our ampelopsis, wistaria, jasmine, roses, and ivy; but no one outside their fraternity seconds the proposition. Has not the Great Architect of the Universe clothed His mountains and rocks with moss, and lichen, and flowers? And yet within a few years an architect has informed us that a garden should be laid out in an equal number of rectangular parts; that everything therein should be simple, formal, and *logical*! and that he should have no more hesitation in applying the scissors to his trees and shrubs with a view to their transformation into pyramids and peacocks, cocked hats and ramping lions, than he should experience in mowing his grass. Should this gentleman secure the sympathy of the public with his rectifications of Nature, it will only remain for the Government to invite contracts for the fulfilment of the Quaker's suggestion that the world should be painted a good, cheap, universal drab."

"There must be in every garden... The grace of *Congruity*. There must be unity without uniformity, a pleasing combination not only of separate parts of the garden, but of the garden itself with the scene around. Every instrument in the great orchestra must be in tune."

"I have watched with great interest attempts to improve Nature. I remember an under-gardener, who carved flowers with his pocket knife out of turnips, chiefly the ranunculus, the camellia, and the tulip, and colored them with stripes and spots of the most gorgeous hues; and I recall a day when, passing by the potting shed, in which he was exhibiting his splendid achievements to a friend, I heard him say,

'They whacks natur', don't they, Dobbs?' And Dobbs replied, 'They whacks her ea-sy.'

"Congruity means the adaptation of Art to Nature, the conformity of a garden with its environs, the study of the soil."

"'Et quid quaque ferat regio et quaque recuset.' It means not only the selection but the setting of the jewels, not only the painting of the picture, but the placing in the frame."

"This then should be the primary endeavor to the true gardener, to collect all the most beautiful specimens which he can obtain of trees, and shrubs, and flowers, and to arrange them with all the knowledge which he possesses of their habit, colour, and form, in accordance with the simplicity, the graceful outlines, the charming combinations of the natural world beyond,

'When order in variety we see,
And where, though all things differ, all agree.'

Working under these rules, copying this model, obeying Pope's edict,

'First follow Nature, and your judgments
frame,

By her just standard, which is still the same,'

he will make but few mistakes, and these will suggest their own rectification, whereas all the endeavors of wealth and self-conceit to follow their own imaginations, without regard to these immutable laws, and to obtain the admiration of their neighbors by the mere costliness of their novelties, or the heterogeneous locations of their plants, inevitably fail. Again and again I have seen such results of lavish expenditure and stolid arrogance as have almost induced ophthalmia and softening of the brain, with an intense longing for the wings of a dove; whereas the same eyes have gazed with a delight, which could not tire, in many a garden where the means were scanty, but the love was large."

THE MATTER OF NAMES.

Of course there must be variety. It might be inferred from an inspection of the majority of our gardens, that no novelty had been introduced into this country for the last sixty or seventy years, and that straight walks through huge clumps of evergreens, chiefly laurels, and their boundless continuity of shade, left nothing to be desired. The true gardener will thankfully avail himself of all the beneficent gifts which reward his patient study and science in the production of new varieties.

In every garden there must be, wherever there may be, seclusion, quiet retreats for for rest and retirement, for contemplation made. Our garden should be our Jerusalem, "the vision and possession of peace." I must have a place to flee unto, when I know that the great landau of the Wopperton-Wickses is in my avenue, because one of their gigantic horses, a little touched in the wind, is loudly expressing his disapproval of a sudden rise in the ground, and because I catch a glimpse the trees of the gorgeous liveries, the cockades, and the calves, and the elab-

orate amorial bearing of the Woppertons and the Wickses mixed.

It is from these dissonant intrusions which confuse the brain, impede the digestive organs, and turn the tranquil waters into seething billows, like the storms of an Italian lake, that we would provide our haven of refuge. I would not make a single garden, which was worth seeing, into "a place of selfish solitude." There is rarely need to ask the question now,

"Why should not these great squires
Give up their parks some dozen times a year,
And let the people breathe?"

As a rule, where decent behaviour can be assured, the most attractive of our English homes are open to the public. At frequent intervals, the true gardener is never more happy than when he has the time for converse with those who can appreciate his work. What I mean is that all gardens should be secluded from supervision, and I think that even of show days there should be some small sanctuary unpoluted by the bag of the sandwich, the peel of the orange, and the cork of the ginger-beer.

THE MATTER OF NAMES.

HOW many gardens we see that contain fine and rare varieties of plants, from which the labels have been lost. How often a named collection of roses we shall say, is planted with the correct labels duly affixed, and after the growing season and the erasing effects of the winter, the labels which came from the nursery, convey no more meaning to the planter than the Egyptian hieroglyphics do to the ordinary scholar. You say, "The nurseryman should supply more lasting labels," but when you consider the short and busy season that is allotted to the

nurseryman to get his orders dug and packed, it is obvious that he must use labels that are most quickly and conveniently written, and for this reason a pine label is written with pencil and wired to one of the branches.

The experienced nurseryman distinguishes different varieties of fruit and shrubbery by their growth, and to the experienced florist the leaves, habit, etc., of most roses, geraniums, fuchsias and countless other plants, silently proclaim the names of the particular varieties. It requires years of experience to become thus proficient in names, and it

is surely not asking too much that the planters preserve the names more carefully. A gentleman buys and plants a quantity of shrubbery, all correctly labelled. Oh! he will say, what need of me to preserve these dreadful Latin names and jawbreakers, why does not the nurseryman give his plants English names? and so in the course of the seasons the names one by one become lost. By and by one flowers, it is different from the rest, it is different from anything in the neighborhood perhaps, some admirer inquires the name, the planter himself is seized by the same desire, but the label is lost and it entails perhaps years of enquiry before the last one is renamed.

It is a pleasure indeed to visit such grounds as those at Queen Victoria Park, Niagara Falls, where trees and shrubs from so many countries are growing and apparently flourishing. Mr. Cameron, the head gardener, readily

tells the name of any specimen in the collection, but says he intends to furnish all with conspicuous labels giving the correct botanical name, also the common or local name, for the information of the public. For herbaceous plants, or for plants like roses, that are pruned heavily each year, good stout cedar labels are the best, 20 in. long, 2 in. wide and 1 in. thick are the usual dimensions, point these, plane them on one side, rub the smooth surface with some light colored paint and write the name heavily and boldly, these labels can be read for several seasons. For permanent names for trees, shrubs, etc., the best thing we have seen is a very thin piece of soft sheet copper, on which the name is written heavily with any sharp pointed tool, and as it is fastened to the tree with copper wire, there is no reason why it should not be legible for a lifetime.

Hamilton.

WEBSTER BROS.

SNOWDROPS.

NOW that we are all planting bulbs let me put in plea for the snowdrop. What other bulb have we that is so pure and dainty, so brave and early, so easily cultivated? A little colony of the bulbs, planted in a sheltered nook will often surprise the owner with a handful of sweet, white flowers in January, notwithstanding the old hymn that

"The snowdrop in purest white array,
First rears her head on Candlemas day."

Scillas, chionodoxas, crocus and aconite bloom about the same time as the snowdrop and might be planted with it for variety, but I shall always want one little colony that is all white. Elwesii giant is the finest of the snowdrops.

The bulbs need only to be planted and then let alone. Under ordinary conditions they soon naturalize themselves. The individuality of the snowdrop—originality, if you will—has made it the subject of many poetical references. All are not equally accurate, however. Tennyson evidently noted the small white flowers, for he wrote:

"Pure as the virgin tint of green,
That streaks the snowdrop's inner leaves."

For the snowdrop is not pure white as some poets would have it. They, I fear, love it better than our gardeners. To find snowdrops in Carolina gardens is the exception rather than the rule.—Vicks Magazine.

A FEW POINTS ON ROSES.



FIG. 1635.—ANNE DE DIESBACH.

YOUR Toronto correspondent asking for a list of hardy roses places no easy task upon a Canadian rose grower, by her special requirement that they must have fragrance. This requirement very much hampers the selection and bars out many of our finest appearing sorts which may be classed as hardy. There are, in fact, but a limited few among the fragrant varieties that can be classed as hardy enough for our climate north of Hamilton.

Permit me to digress for a moment to say that your correspondent, M. E. B., in the July number, testifies— together with a considerable number of private inquiries which I have received through the post on the same subject—

to the gratifying interest that is taken in rose culture in this splendid province of ours. I had no idea that so many, even beyond our province, were looking for the fulfillment of that promise which I made in the December number of the *HORTICULTURIST*, to give a gilt edge list of really hardy roses in time for spring planting. I had to answer each one, as I must now explain to M. E. B. that I feared to give a list during the awfully severe winter lest there might not be many or any of those in existence, when the spring opened, which I might have named. And it is well that I did fear and act cautiously, for the past winter has compelled me to reverse my list.

Assuming that the climate at Toronto is only a trifle more severe than that at Hamilton, I will endeavor to give a list subject to my latest experience of "Our Lady of the Snows," having regard as far as possible to the requirement named by your Toronto correspondent. I cannot, however, get a very dark, real hardy rose, with fragrance, to take the place which must be given to Baron de Bonstetten, nor a next in shade to substitute for Gen. Jacqueminot, which is only slightly fragrant. For fragrance in the very dark shade Jean Liabaud will surpass the Baron de Bonstetten, but it is not so hardy nor quite so strong a grower. Then comes in order Alfred Colomb, with the only fault that it sometimes lacks in vigor and does not fully open all its blooms. It should, however, do well at Toronto. Next comes Francois Levit, Francois Michelin, slightly tender, Baron Provost, Leopold Premier, slightly fragrant, Duke of Edinburgh, Magna Charta and Anne de Diesbach. This brings us into the lighter shades and we

have no choice except we depart from the hardy lines and take Mad. Gabriel Luizet, which is worth all the trouble of protecting. I lost all my bushes root and branch last winter, under 35 degrees below zero, but intend to set out half a dozen plants again this fall. For a white rose there is none that will take the place of Mad. Plantier, and there

does not seem to be much demand for a white out door rose. Mrs. J. S. Crawford is a charming rose, so is Ulrich Brunner, but neither is hardy. Dinsmore is not a good rose, nor are several of those named by Mrs. Moskin suitable to our climate.

T. H. RACE.

Mitchell, July 18th.

IMPORTED BULBS AND THEIR CULTURE.

IMPORTED bulbs, or bulbs of foreign growth, which have met with greatest favor, and are perhaps the most suitable for mid winter flowering are: Hyacinth, Narcissus, Tulips, (*Lilium Harrisii* or Bermuda), *Easter lily*, *Lilium longiflorum*, Freesia and Crocus.

These are imported in large quantities between July and November from France, Holland, Germany, Bermuda and Japan.

The Black Calla or *Arum Sanctum* may also come under this head, as it is an importation from Asia Minor, but the Calla lily or White Calla is a production of California.

Bermuda freesias are perhaps the earliest to appear on the market, some of which, grown this year, were with us as early as June 20th, these were followed a few days later by *L. Harrisii*; Roman hyacinths from Aug. 5th to 10th; narcissus, Aug. 20th; hyacinths, tulips and other Dutch bulbs, Sept. 5th to 10th; a full supply of lilies during October, with Hamburg lily of the valley pips later, or about Nov. 5th to 10th.

Were I asked to name the most popular of these bulbous plants, or the one for which there is the greatest demand I would have to name the hyacinth; therefore, I shall confine my remarks to this special bulb, and feel, should these

notes prove helpful to any readers of THE HORTICULTURIST, I will be thoroughly repaid, and may, at a future date, give a short note on the cultivation of the others. As a rule, we may say that bulbs require a rich loam soil, to which about one-fourth its bulk of sand has been added. In the culture of the hyacinth I would suggest a liberal addition of leaf soil, to fibrous loam, sharp sand and well decayed cow manure, it is important that the same be thoroughly mixed and allowed to stand some time before use.

Roman and Dutch are the two important classes by which hyacinths are known, Romans being the most used for forcing.

When forced, this variety may be brought to bloom between the 15th and 20th of December. Dutch hyacinths are commonly grown for bedding and decoration, and are not forced to any extent for their flowers. When cultivating the hyacinth in pots, leave the top of the bulb a trifle exposed and let the soil be moderately moist.

The pots should be placed outdoors on a bed of wet ashes, covered with six inches of the same material and left exposed to the weather. When the bulbs are well rooted and about an inch of top growth has been made they may be removed indoors, to force; first into a

IMPORTED BULBS AND THEIR CULTURE.

subdued light until the blanched foliage has attained its healthy green color and then to a sunny situation.

Abundance of air and plenty of water at the roots is necessary for early well developed flower spikes.

A dry or frosty atmosphere, or a draughty situation, will cause the flower buds to shrivel. Force gently in a temperature of about 70 degrees.

If you prefer finely developed trusses of rich colors to early flowers, the hyacinth should not be forced, but left longer outdoors to develop and then removed to a mild temperature like that of a sitting room window, where it will also get the most sunlight.

When cultivated in glasses the base of the bulb should at all times just touch the water in which a few pieces of charcoal have been placed.

Keep in a cool, dark place until there is an abundance of root growth, they can then be gradually admitted to the light until they are placed in the sunniest situation. Avoid a too dry or frosty atmosphere.

Bulbs that have flowered in water are of little use, and results of any account can be had only when planted out of doors.

When done flowering cut down the flower stalk and continue watering, allowing the leaves to return their nutriment to the bulbs. When the leaves have become withered the bulb should be placed

in a sunny situation for a week to dry, and then placed in dry sand for next season.

Quite often bulbs of the second year's growth, or those which have not attained a sufficient supply of roots before being admitted to the light, will put forth their buds away down among the leaves and refuse to elongate their flower stalks as they ought to, which is disappointing indeed.

If you observe a tendency in this direction make some cones of thick paper and invert over the plant, cut off the apex of the cone making a hole about an inch in diameter for admission of light. The buds will reach up towards this opening in their eagerness to get to the light, and in this way the stalk can be made to lengthen itself properly. While hyacinths are in bloom it is well to remove them from direct sunlight as the flowers will last much longer in a cooler temperature. In conclusion, I might add that the bulb reports for this season are not at all promising, especially from Dutch and French growers.

Dutch growers will consider themselves quite fortunate if their yield amounts to half their production of former years, the larger sized bulbs will, no doubt, advance considerable before the season closes.

DORLAND COLLIER





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.

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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. ✦

THE APPLE CROP in Western New York is reported to be about one-half a full crop.

THE OFFICIAL REPORT of the Annual Fruit Growers' Meeting of Prince Edward Island for 1898 is at hand, and proves clearly that the people there are wide awake to their interests, and are planting apple orchards quite freely, in view of the excellent results obtained from their first shipment.

AT the recent great International Horticultural Exhibition at St. Petersburg, the Wibolts seed establishment in Naskov, Denmark, was awarded the highest prize, viz., the largest silver medal for Danish grown cauliflower and cabbage seed.

RASPBERRY PULP.—A letter from

Harrison Watson, Imperial Institute, our Dept. of Agriculture, give some encouragement to ship raspberry pulp this season. The old country crop is very short, owing to drouth, and now is the most favorable time to forward some cases for a thorough trial of this industry. We hope our Committee will make preparations for this, and give us a complete and reliable report of the prospects of the trade, because, if a success, it would help the price of the fresh fruit in our country.

THE WICKSON PLUM.—On the 21st of July we received a fine sample of this plum, from Mr. W. E. Wellington who has so much confidence in it that he has planted it quite largely to grow the fruit for profit. It is the largest of the Japan plums, a cross between Kelsey and Burbank, and is of such a fine bright red

NOTES AND COMMENTS.

color that it surely would sell like "hot cakes" in the market. The sample sent us measured 2 inches in diameter, the flesh was amber yellow, tender and juicy, and of very agreeable flavor. It will be remembered that this plum was originated by the celebrated Luther Burbank, of Santa Rosa, California.

THE GREEN FRUIT WORM, *Xylina antennata*, was very abundant in Ontario orchards during the months of May and June, and did much destruction to



FIG. 1636.—

the young fruit, eating large holes in the sides of many of the finest samples. In 1896 a bulletin was issued by Prof. Slingerland, of Cornell University, on this worm. It was calculated that in that year, 25 per cent. of the apples in New York State were ruined by it. The insect was first noticed in Missouri and Illinois in 1870, eating holes in the fruit, and in 1877 they appeared in large

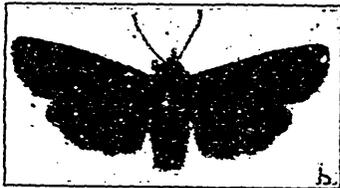


FIG. 1637.—

numbers about Lockport, N. Y.; on one young pear orchard 45 per cent. of

the fruit being injured. Collectors have found the moths in widely distant districts in Canada and the United States, so that they have now become widely distributed.

MR. SLINGERLAND SAYS: During the first week in June most of the caterpillars get their full growth and then burrow into the soil beneath the trees to a depth of from an inch to three inches. Here they roll and twist their bodies about until a smooth earthen cell is formed. Most of them then spin about themselves a very thin silken cocoon; some spin no cocoon. Within the cocoon or the earthen cell, the caterpillar soon undergoes a wonderful transformation which results in what is known as the *pupa* of the insect. Most of these insects spend about three months of their life in the ground during the summer in this pupal stage. Some evidently hibernate as pupæ, and thus pass nine months or more of their life in this stage. Usually about September 15th, the moths break their pupal shrouds and work their way to the surface of the soil. Most of them emerge in the fall before October 15th, and pass the winter as moths in sheltered nooks; some evidently do not emerge until spring. Warm spells in winter sometimes arouses a few of them from their hibernation.

During the first warm days of early spring, all the moths appear, and doubtless the mothers soon begin laying eggs. No observations have been made on the eggs or young caterpillars in the North, but in a newspaper article published in the South in 1872, it is stated that the eggs are deposited in the spring on the underside of the leaves. They hatch in a few days, and the young worms begin at once to eat the foliage, or the fruit, or both.

THE CANADIAN HORTICULTURIST.

There is thus but one brood of these green fruit worms in a year. They work mostly in May, pupate in the soil in June, live as pupæ during the summer and sometimes all winter, and most of the moths emerge in the fall and hibernate, laying their eggs in the spring.

THE BEN DAVIS APPLE AND THE KIEFFER PEAR. — Considerable discussion is being carried on in American papers regarding the merits of these two fruits. Some condemning them wholly because of their poor quality, and others claiming that they have great merits. W. H. S. says in the Rural New Yorker :

“The Ben Davis apple, as grown in northwest Missouri, is good in its season. One reason why it is so often condemned is that it is put on the market as early as October as an eating apple, when in fact it is not usually fit to eat before the middle of January. It looks good at any time, is bought out of season, then condemned. I consider the Ben Davis apple as a fairly good eating apple in its season, that is, from January 20 and after, and would consider that my Winter supply of provisions was not complete if I did not have a good lot of Ben Davis in my cellar. After they get good, I notice that they are usually selected first when brought out with other apples, both by my own family and by visitors. Try some northern Missouri Ben Davis next year, but do not expect them to be good until their time comes.

“As to the Kieffer pear, my trees have been bearing for a number of years. When properly ripened after being left on the trees as long as is safe from frost, they get mellow to the core, are juicy and good, and while they are a little coarse, the flavor is very fine. Last year, I had a surplus for the first time, and all were sold at the house at

\$2 per bushel, and many were called for after all were gone, so I conclude that there are others who like them. Perhaps climatic conditions have something to do with both of these fruits; but as grown here, both are good in their season, and both readily sell at the highest price, which goes to prove that many people like them.”

ONTARIO FRUIT EXHIBIT AT PARIS. — Mr. A. McD'Allan, Supt. of Horticulture for Canada at the Paris Exposition of 1900, is busily engaged in planning out his work of securing a creditable exhibit of Canadian fruits. He estimates that at least 1,000 bottles should be allowed our province for tender fruits, to be put up this summer. Then in the autumn many varieties of our best apples, pears and grapes are to be sent forward and held in cold storage at Paris. In this way a creditable exhibit can be made from the very beginning.

The object is to represent the fruit-growing interests of Ontario as a whole, and every part of the province will be invited to participate. The plan is to utilize the Ontario Fruit Grower's Association, asking each director to make such contributions as would best represent the agricultural division he represents. He will invite the co-operation of the affiliated Horticultural Societies, whose exhibits will be credited to the Society, and individuals contributing will also receive full credit. The fruit experiment stations will also be invited to share in this work, and will be fully represented at Paris with the special fruits which they grow.

In this way it is hoped that Ontario may be well shown to be a grand fruit growing country, and may win the attention of many colonists; it may be also that special business openings for the

NOTES AND COMMENTS.

sale of our fruits will result for the general good. We presume that similar schemes will be planned in the other provinces.

We give a list of the agricultural divisions in Ontario, with names of directors, experimenters and secretaries of affiliated societies,

DIVISION I.—Stormont, Dundas, Prescott, Glengarry.

Director.—W. A. Whitney, Iroquois.
Horticultural Society.—Iroquois, W. J. Forward.

DIVISION II—Lanark, Renfrew, Carlton, Russell, Ottawa.

Director.—R. B. Whyte, Ottawa.
Horticultural Society.—Auriprior, Geo. E. Neilson.

DIVISION III—Frontenac, Leeds, Grenville.

Director.—Geo. Nicol, Catarqui.
Experimenter.—Harold Jones, Maitland.
Horticultural Societies—Brockville, Geo. A. McMullen; Cardinal, E. E. Gilbert; Kemptville, T. K. Allen; Smith's Falls, W. M. Keith.

DIVISION IV.—Hastings, Addington, Lennox, Prince Edward.

Director.—Wellington Boulter, Picton.
Experimenter.—W. H. Dempsey, Trenton.
Horticultural Societies.—Beleville, W. J. Diamond; Napanee, J. E. Herring; Picton, W. T. Ross; Stirling, Davis Sager; Trenton, S. J. Young.

DIVISION V.—Durham, Northumberland, Victoria.

Director.—Thos. Beall, Lindsay.
Horticultural Societies.—Campbellford, E. A. Bog; Cobourg, H. J. Snelgrove; Lindsay, F. J. Frampton; Millbrook, W. S. Given; Port Hope, A. W. Pringle.

DIVISION VI.—Ontario, Cardwell, York, Peel.

Director.—E. C. Beinan, Newcastle.
Experimenter.—R. L. Huggard, Whitby.
Horticultural Societies.—Whitby, R. L. Huggard; Brampton, H. Roberts.

DIVISION VII.—Wellington, Waterloo, Wentworth, Dufferin, Halton.

Director.—M. Pettit, Winona. *Vice-President*, W. M. Orr, Fruitland.
Experimenters.—M. Pettit, Winona; A. W. Peart, Freeman.
Horticultural Societies.—Freeman, W. F. W. Fisher, Hamilton; J. M. Dickson, 22 Bruce St.; Orangeville, Wm. Judge; Oakville, W. W. Paterson; Waterloo, J. H. Winkler.

DIVISION VIII.—Lincoln, Niagara, Welland, Haldimand, Monck.

Director.—A. M. Smith, St. Catharines.
Experimenter.—M. Burrell, St. Catharines.
Horticultural Societies.—St. Catharines, W. C. McCalla; Grimsby, E. H. Read; Hagersville, S. W. Howard; Port Colborne, A. E. Augustine; Niagara Falls, T. J. Robertson, Queen St.

DIVISION IX—Elgin, Brant, Oxford, Norfolk

Director—J. S. Scarff, Woodstock.
Horticultural Societies.—Paris, Gordon Smith; Simcoe, Henry Johnson; Port Dover, W. J. Carpenter; Woodstock, J. S. Scarff.

DIVISION X.—Huron, Bruce, Grey.

Director.—J. I. Graham, Vandeleur.
Experimenters.—A. E. Sherrington, Walkerton; J. G. Mitchell, Clarksburg.
Horticultural Societies.—Durham, Wm. Gorsline; Seaforth, C. W. Papst; Kin-cardine, Jos. Barker; Meaford, A. McK. Cameron; Thornbury, A. W. Walker, Clarksburg; Owen Sound, A. McK. Cameron.

DIVISION XI.—Perth, Middlesex, London.

Director.—T. H. Race, Mitchell.

DIVISION XII.—Essex, Kent, Lambton.

Director.—A. McNeill, Walkerville.
Experimenter.—W. W. Hilborn, Leamington.
Horticultural Societies.—Chatham, Geo. Massey; Windsor, A. W. Joyce; Leamington, E. E. Adams.

DIVISION XIII—Algoma, Simcoe, Muskoka Parry Sound.

Director.—G. C. Caston, Craighurst.
Experimenters.—G. C. Caston, Craighurst; S. Spillet, Nantye; Chas. Young, Richard's Landing.
Horticultural Societies.—Midland, Miss M. Tully; Orillia, C. L. Stephens.

WILD MUSTARD is one of the most troublesome weeds the Canadian farmer has to destroy, because it grows up and ripens with his grain crop and can only be got rid of by pulling it out one stalk at a time. Doherty, of O. A. C., Guelph, has tried spraying with different strengths of iron sulphate and those of copper sulphate on six plots. The application of 2 per cent. copper sulphate was entirely satisfactory, completely destroying the mustard and not injuring the oat crop in which it was growing.

✠ Question Drawer. ✠

Apple Trees Dying.

1101. SIR,—I would like to have your advice as to what to do for my apple trees. The leaves are all turning brown and they are dying by the dozen. Most of them were planted four years ago and have done well: they are mostly Yellow Transparents and healthy. Duchess and crab apples are not affected so bad. I thought the leaves faded off a little unnatural last fall, they have not looked very healthy all spring: the weakest of them dying first. Now the whole orchard of 150 trees has a dusty brown shade, with the leaves curling up. I thought possibly it was the wet season, as part of the orchard is rather wet clay, but the trees on the dry light soil are going now as well as the others. A few of them have bark loosening on the south side from sun scald, but most of them have real healthy trunks. I have not done any spraying. What do you think is causing it, and what remedy can I apply?

L LOVE.

Port Saunfeld, Muskoka.

We fear there is no remedy for the trouble affecting your apple trees. The sample sent us has the appearance of apple twig blight, which has been a very wide scourge this season. It may, however, be the result of the recent severe winter which has injured the roots of orchard trees, especially of the peach trees, in such a large area. Strange to say, the vitality stored up in the tree enables it to put forth leaves in the spring, and even form some fruit, but alas, in time the enfeebled condition of the roots soon begins to show itself in a dead or sickly top, and the tree is past recovery. If the evil is wide spread, this latter would be the explan-

ation; if only a few trees, it is probably twig blight.

Fruit in Cape Breton.

1102. SIR,—I am sending you herewith, by parcel post, a box containing two Northern Spy apples; a small vial containing beetles which I picked off my pears last autumn, and a few withered fruit spurs from a pear tree—the latter I took off the tree to-day. When the blossoms dropped off the tree the leaves on the fruit spurs withered up and are still clinging to the twig, while the other leaves on the tree seem to be perfectly healthy.

Will you kindly say what you think of the quality of the apples? What are the beetles? Are they injurious to the pear? And what is the trouble with the pear tree?

Plums will be a good crop here; apples fair only. The late cold weather of May and June probably was the cause of the fruit not setting well.

Referring to a recent article in the *HORTICULTURIST* regarding Prunus Pissardi, I have one ten years planted which is beginning to show signs of failing health and is becoming rather unsightly, but it was a beautiful tree for several years.

D. S. McDONALD.

Glendyer Mills, C.B.

We should suppose from your description that your trees are affected with the pear blight, which often begins with the fruit twigs.

The samples of Spy apples are in a wonderfully good state of preservation, and if they have only had ordinary storage, their condition would go to show that apples with our correspondent are better keepers than those grown in Ontario.



* Open Letters. *

The Plum Crop.

SIR,—The plum crop is a total failure with me. Apples are very, very light, and still dropping; do not think this section will have more than two-thirds as many apples as last season, but they will be better quality, free of fungi.

W. H. DEMPSEY, *Trenton, Ont.*

Plant Distribution.

SIR,—In regard to plant distribution to subscribers to CANADIAN HORTICULTURIST, I feel something like Mr. C. B. Jackes, Toronto. I may say also that very often plants arrive thoroughly baked in transit. This year you sent plum trees by express and really it is the first time plants have reached me in good order.

Could the suggestion of publishing a list of hardy plants, and especially where to obtain them, be given, it would be of great benefit. You sometimes recommend, or rather parties writing recommend, especially hardy types of plants, but no nurseryman in Canada seems to have them, though they may be advertised by American firms.

In regard to Eleagnus. I have Eleagnus Longipes and some other kind sent out by Steele some years ago. Both are half hardy here, and fruit seems about the same: not much for eating anyway.

HENRY C. GUY,
Dudley, Muskoku, Ont.

The Tent Caterpillar.

SIR,—Enclosed you will find some cocoons of the tent caterpillar and you will see that the insects are all dead; not one in twenty can be found living. In many of the cocoons there is a white larva. I witnessed the fly at work yesterday; it eats a hole into the cocoon with its mouth and then inserts its ovipositor; but the one I saw at work failed to

get a hole through the cocoon, owing to its toughness, time and again it would try with its mouth and then with its ovipositor.

The fly resembles the wasp only much smaller; the head, thorax and abdomen are black, with six white stripes across the abdomen. It had six legs of a light red color and two wings almost transparent, with a black spot at the outside half way from the end. It had two (do you call them horns) (*antennae*, Editor) about half an inch long, and it had two ovipositors $\frac{1}{2}$ of an inch long and it placed them both together when trying to perforate the cocoon.

J. L. G.

The Plant Distribution.

SIR,—I noticed in the June number of the HORTICULTURIST you requested an expression of opinion re plant distribution. I would be in favor of discontinuance, and devoting the \$600 to the journal.

I notice in the July number some 30 subjects treated on, I also find about one half that number is copy from American journals, etc. Now I don't object to the American articles, as they are all good, but I do think that there ought to be far more Canadians giving their experience (Horticultural) through the columns of your valuable journal; I would suggest that part of the \$600 be devoted to giving cash prizes for the best article or answers on any horticultural subject you may name from time to time in your journal.

The above suggestion is made after reading Mr. C. B. Jackes remarks in the July number re the bonus distribution of plants to give a list of shrubs, etc., suitable for the Canadian climate. Now I think by giving a cash prize for the best article on shrubs, etc., it might be the means of bringing out more Canadian writers. Not for the sake of the cash, but for the honor of being first.

MAT. MCCREATH,
The Cemetery, Kincardine.

Regarding the beetles, (referred to in question 1102) Dr. Fletcher, of Ottawa, says:—

The insects found on pear tree at Glendger Mills, C.B., by D. S. McDonald, are specimens of a predacious there-

fore beneficial bug. The gray soldier bug (*Euschistus tristigmus*) which destroys plant lice and caterpillars. With their proboscis, which when not in use is folded under the breast, they kill their prey and extract the juices.

PRESERVATIVES FOR BOTTLED FRUITS.

FOR exhibition purposes it is well to preserve some of our finer fruits in bottles, especially those which can not otherwise be kept. Our experiment station fruit exhibit in bottles at Toronto has always attracted a good deal of attention, and will be of increasing interest year by year. The following formulæ have been recommended by Dr. Saunders for the use of those putting up fruit for the Paris Exposition, and we give them in full because so many are interested in trying the experiment for themselves :

GENERAL DIRECTIONS.

Select the finest specimens of the fruit both as to form and size. Handle them carefully to avoid all bruising and place them in bottles, arranging the specimens so as to show them to the best advantage. Fill each bottle to the neck with fruit, then pour on the fluid recommended, filling the bottles to within half an inch of the stopper so as to entirely cover the fruit. Then place the stopper in the bottle and run a little beeswax or parafine over the joint to make it air-tight. Tie the stopper down with a piece of strong cotton, and attach to each bottle a label containing the following particulars: Name of the variety of fruit, name and address of the grower, with the province in which the party resides. Write also in each case in one corner of the label the letter suggested to indicate the fluid which has been used. Wrap the bottles in paper to exclude the light, and preserve in a cellar or other cool place until required for shipment. Strawberries and raspberries should be cut from the plants or bushes with a pair of scissors, leaving a short piece of stem attached to each.

FLUID NO. 1.

Formalin (formaldehyde) one pound (16 oz.); water, 44 pounds; alcohol, 5 pints. Allow the mixture to stand, and should there be any sediment pour off the clear liquid and filter the remainder through filtering paper. This two per cent. solution of formalin or formaldehyde has been found very useful for preserving strawberries so as to give them a natural appearance.

In each case where this fluid is used mark F on one corner of the label.

FLUID NO. 2.

A solution of boric acid in the proportion of two per cent. Dissolve one pound of boric acid (boracic) in 45 pounds of water, agitate until dissolved, then add 5 pints of alcohol. If the fluid is not clear, allow it to stand and settle, when the clear upper portion may be poured off and the remainder filtered.

In each case where this fluid is used mark B on one corner of the label.

FLUID NO. 3.

A solution of zinc chloride in the proportion of three per cent. Dissolve one-half pound of zinc chloride in 15 pounds of water, agitate until dissolved, then add $1\frac{2}{3}$ pints of alcohol. Allow the mixture to stand until settled, then pour off the clear fluid and filter the remainder.

In each case where this fluid is used mark Z on one corner of the label.

FLUID NO. 4.

Sulphurous acid, 1 pint; water, 8 pints; alcohol, 1 pint. Allow the mixture to stand, and should there be any sediment, pour off the clear liquid and filter the remainder.

In each case where this fluid is used mark S on the corner of the label.

PRESERVATIVES FOR BOTTLED FRUIT.

LIST OF FRUITS WITH THE NAMES OF PRESERVATIVES TO BE USED IN EACH CASE.

(Where two fluids are named either may be used, but the first named is preferred.)

Strawberries.—Solution No. 1, formalin.

Raspberries, Red.—No. 2, boric acid ; No. 1, formalin.

Raspberries, White.—No. 4, sulphurous acid ; No. 3, zinc chloride.

Raspberries, Black.—No. 2, boric acid.

Blackberries.—No. 2, boric acid ; No. 1, formalin.

Cherries, Red and Black.—No. 1, formalin ; No. 2, boric acid.

Cherries, White.—No. 4, sulphurous acid.

Currants, Red.—No. 1, formalin ; No. 2, boric acid.

Currants, White.—No. 4, sulphurous acid ; No. 3, zinc chloride.

Currants, Black.—No. 2, boric acid.

Gooseberries.—No. 1, formalin ; No. 2, boric acid.

Apples, Green and Russet.—No. 3, zinc chloride.

Apples, more or less Red.—No. 2, boric acid.

Apples, White and Yellow.—No. 4, sulphurous acid.

Pears, Russet.—No. 3, zinc chloride.

Pears, Green or Yellow.—No. 4, sulphurous acid.

Plums, dark colored varieties.—No. 1, formalin ; No. 2, boric acid.

Plums, Green or Yellow.—No. 4, sulphurous acid.

Peaches, Apricots, Nectarines or Quinces.—No. 4, sulphurous acid ; No. 3, zinc chloride.

Grapes, Red or Black.—No. 1, formalin ; No. 2, boric acid.

Grapes, Green or Yellow.—No. 4, sulphurous acid.

A FRUIT-LADDER.

ANY farmer or bright farmer's boy who can handle a brace and bit can make a ladder which is almost necessary in picking fruit. Its manufacture is so simple that a glance at the illustration will suffice to show how it is done.

Select a good straight cedar pole (cedar is very light, yet strong), peel it, and ring it near the small end or wrap it with strong galvanized wire. Line it off with a chalk line, and bore the holes for the rungs. Then rip it down to the ring; this must be done carefully. Complete the operation by making and fitting the rungs, using some tough wood, such as white oak. After it is finished give the whole ladder a soaking coat of linseed-oil, after which it can be painted if desired. This will make a light ladder which can be inserted between the limbs of fruit-trees and poked up under the trees where an ordinary ladder would be useless or would greatly injure the branches.

The cedar pole will make the lightest and best ladder of this sort, but if it is not convenient to procure a pole, two strips of tough white oak one and one half by three inches, bound and screwed together at the top, will serve as sides for the same. In either case edges should be rounded off, to prevent injury to limbs of trees against which the ladder may rest.—Farm and Fireside.

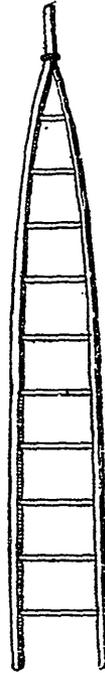


FIG. 1638.

ONTARIO FRUIT CROP REPORT.

	Apples.	Apricots.	Blk. Berries.	Cherries.	Currants.	Grapes.	Fears.	Peaches.	Plums.	Gooseberries.	Raspberries.
Lincoln—											
A. M. Smith, St. Catharines.	poor					very good.	fair	fair	fair		
Wentworth—											
M. Pettit, Winona	fair		fair	good	fair	good	good	very good.	very good.	fair	fair
W. M. Orr, Fruitland }											
Burlington District—	poor to					fair to	poor	poor	fair to		fair
A. W. Peart, Freeman	fair		fair	good	good	good	poor	poor	good		fair
(Greenville and Dundas—											
W. A. Whitney, Iroquois.	very poor.		very good.	none	very good		very poor.	none	very poor.		very good.
Victoria and Peterborough—											
Thos. Beall, Lindsay	very poor.					poor to	poor	none	none		
Essex—											
W. W. Hillom, Leamington.	fair					poor to	good.	very poor.	poor		
Prince Edward—											
W. Boulter, Picton	fair					good	fair	good	good		good
Ontario—	fair to										
R. L. Huggard, Whitby	good		poor				good	none	very poor	fair	very good.
York											
W. E. Wellington, Toronto.	fair						fair		light.		
Frontenac—											
Geo. Nicol, Catarqui	poor						poor		very poor.		
Ottawa—	poor to										
R. B. Whyte	fair					*very good			poor		
Grey—											
J. J. Graham, Vandeleur.	good					frozen.	fair		fair		
J. G. Mitchell, Clarksburg.						good	fair		dropping.		
Grenville—											
Harold Jones, Maitland	very poor.						poor		none.		
Durham**—											
E. C. Beman, Newcastle.	poor.					fair to good	fair.		very poor.		

*If weather keeps favorable, we will have a very heavy crop of grapes, one of the best on record.—R. B. Whyte.
 **Orchards not sprayed—suffered much from tent caterpillar.