

THE
CANADIAN
Horticulturist.



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JESSICA.

THE
Canadian Horticulturist.

VOL. VII.]

FEBRUARY, 1884.

[No. 2.

THE JESSICA GRAPE.

The progress that has been made in the matter of grape growing within a few years is truly astonishing. It is not more than twenty-five years since all the varieties in cultivation in the open air did not exceed half a dozen in number. The principal of these were the Isabella, Catawba and Clinton. The Isabella is supposed to be a native of South Carolina, and to have been introduced to the notice of northern horticulturists about the year 1818 by the late Wm. Prince, who named it in honor of Mrs. Isabella Gibbs, of whom he obtained it. It does not mature its fruit well in Ontario generally, although until the advent of the Concord it was the variety most often to be found in our fruit gardens. The Catawba is said to have originated in North Carolina, to have been taken from there to Maryland, and was introduced by Major Adlum of the District of Columbia about the year 1820 to the horticultural public. This grape though unsurpassed in quality, unfortunately is later in ripening than even the Isabella. It is said that the original Clinton was planted in the grounds of Professor Noyes, of Hamilton College, N. Y. in 1821, by the Hon. Hugh White, where it still remains. This variety is very hardy, ripens its fruit over a large part of Ontario, but the flavor is too acid to admit of it ever becoming a favorite in this Province.

For a long time these continued to be about all the varieties we had. In 1853 Mr. E. W. Bull, of Concord, Massachusetts, first exhibited his now celebrated Concord grape, which has been widely disseminated, and more abundantly planted than any other, perhaps than all the others combined. From this time we date a new era in grape growing in America, and great improvements in the earliness, hardiness and general adaptation of the vines to our northern latitudes.

The variety called Jessica and now presented to the notice of our readers is of Canadian origin, having been grown from seed by Mr. W. H. Read, in the County of Lincoln and Province of Ontario. It has proved itself thus far to be perfectly hardy in our climate, free from disease and enormously productive. It ripens very early, among the earliest we have; it is very sweet, free from all foxiness, sprightly and aromatic. The colour is a yellowish green, in some berries a yellow amber. For general appearance of berry and bunch, and foliage, our readers are referred to the excellent colored illustration, executed by Canadian artists, Rolph, Smith & Co., of Toronto.

The venerable President of the American Pomological Society, the Hon. M. P. Wilder, in a letter to the writer says, "Its pulp is remarkably free from hardiness, and to my taste entirely free from the aroma of our native species. It resembles in appearance the Chasselas type, and affords another illustration of the progress which has been made in the improvement of the grape in our

day.”

The late H. E. Hooker, of Rochester, N. Y., wrote of it, “the quality of the fruit and its fine flavor pleased me very much.”

John Hoskins, Esq., of Toronto, says of it, “I consider it an excellent grape, has not the slightest taint of ‘fox’, and is, I think, the earliest grape I have.”

Mr. John Blain, of Louth, Lincoln County, says, “having fruited the Jessica five or six years I can bear evidence that it is remarkably productive, very hardy, and without a rival in quality, of medium size, and a good keeper.”

Mr. James Taylor, of St. Catharines, says, “I have fruited the Jessica two years, have found it hardy, very prolific, and free from mildew or any other disease. I consider it superior to most of the new varieties, and know of no better white grape.”

These are the opinions expressed by those who have some knowledge of this new variety. What the result of more extended trial in a great variety of soils, different exposures and yet colder latitudes will be, can only be told after some years. In the meanwhile those who may give it a trial are requested to give the results of their experiment to the readers of this magazine. If our readers all over the province would only give each other the benefit of their experience through the columns of the *Canadian Horticulturist* we would soon arrive at the value of any given fruit in any and every part of Ontario.

Mr. A. A. Wright, of Renfrew, Director of our Association for the second district makes this appeal, which the editor most heartily endorses. “If the *Canadian Horticulturist* is to be a grand success—as we all hope it will be—it must rely largely on contributions from our members for variety, freshness, and interesting information. It is permitted to no one man to monopolize all the horticultural or floral information obtainable, but it is scattered through the minds of many. Should each member therefore of our Association furnish but one letter annually to our monthly, how much more interesting might it not be made? Can we not prevail on a good number to try what they can do?” Will not you, gentle reader, contribute something to these pages this year?

TAYLOR’S PROLIFIC BLACKBERRY.

It would seem that this variety has not proved to be as hardy in Iowa as the *Sagder*. It produces larger berries, which ripen a few days later, and are described as being long, about the shape of a short-ended thimble; sweet, high flavored, melting, without core and having few seeds; in short the best flavored blackberry one ever ate. Thus far it has proved to be sufficiently hardy to endure the winters of the Niagara District, and the plants are excellent bearers.

FLORIDA IN WINTER.

It was on the third day of March last, when you were wading in snow drifts, and wrapping your muffler close about your ears in order to keep out the biting, frosty winter winds, that in company with your honored, then Vice-President, Wm. Roy, Esq., of Royston Park, I set foot on the gulf coast of Florida at Cedar Key. We had enjoyed a most pleasant sail down the Mississippi from New Orleans and across the Gulf of Mexico. The weather had been most enjoyable. As we steamed down the river, we saw large gangs of men and women at work on the sugar plantations.

We were told that they were planting sugar cane. Each of these plantations seems to contain a large number of acres. About in the middle of their breadth, but well to the front and near the bank of the river, stands the planter's house, of two stories in height, usually painted white, with veranda extending across the whole front, and flanked on each side with a double row of small white cabins, in which, in other days, lived the slaves. In the rear of all is the sugar mill. It is a long, narrow building, with a tall chimney stack rising high above every surrounding object. The river bank is much higher than the adjacent fields, and the deck of our steamer seemed to be about on a level with the second story of the planters' houses. We learned that there is thirty-five of these sugar manufactories now on this part of the river, and that the gross product is about fifteen thousand hogsheads of sugar, and twenty thousand barrels of molasses. The average yield per acre here is thought to be a little under two thousand pounds of sugar, and one hundred and twenty barrels of molasses. Adjoining the sugar plantations are those devoted to the cultivation of rice. As we passed them they seemed like vast tracts of waste low land, without tree or shrub. Indeed all this river front is a vast treeless stretch. In the distance we saw occasional trees of live oak, but most of the timber seemed to be nothing but cypress, telling of deep swamps and fathomless marshes. The saw mills and sugar house furnaces long ago used up all the accessible timber and fire wood, and save the little fuel required for domestic purposes, the sugar mills depend upon coal and the refuse cane from which the juice has been expressed for their fuel.

The cultivation of rice along the river here has greatly increased since the return of peace. Strange as it may seem the labor is mostly done by white men, notwithstanding the fact that the most laborious part of this industry comes in the months of June and August. These rice farms vary from twenty to two hundred acres. The average yield is said to be about twelve barrels of rough rice to the acre, worth usually about five dollars per barrel.

Below the sugar and rice plantations we passed a tract devoted to orange culture. This industry, we were told, has been carried on here from very early times, and it is claimed that there are orange trees yet standing that are over a hundred years old. For some thirty miles we passed through continuous groves of orange trees, looking not unlike young and very upright apple trees, of compact style of growth, with very rich dark green foliage. Some of these orange orchards are very large. One was pointed out to us as comprising one hundred acres, and containing ten thousand orange trees, the fruit from which in one season sold for twelve thousand dollars. There were no oranges on the trees that we could discover as we passed; the harvest season was some months ago, and these golden apples had doubtless been long since converted into golden coin. The houses that we could see among the orange groves seemed small as compared with those on the sugar plantations, and the negro cabins were wanting.

This cultivated belt extends for about sixty miles below New Orleans, running back on both sides of the river to a depth of about half a mile. Beyond and below this what land there is cannot be cultivated, it is mere swamp and sea marsh, and floating prairie, whose hard bottom has not yet been discovered. Within this arable strip on each side of the river there is grown a considerable quantity of figs, and small quantities of lemons, citrons, bananas, and occasionally the pomegranate and persimmon.

Late in the afternoon we passed out of the river and turned our course nearly due east across the gulf. Night comes suddenly in this southern latitude. We were scarce out of sight of land when the darkness shut us in. The next day was beautifully bright, the sky without a cloud, a strong breeze just rippled the water, which broke in a white foam from the steamer's bow as it ploughed its eastward track. At noon our captain took his observations and reported our position to be in latitude $28^{\circ} 59'$ north, longitude $85^{\circ} 39'$ west from Greenwich, the thermometer indicating 70° Fahrenheit. When night came on, and the "sentinel stars set their watch in the sky," we looked for our familiar northern constellations. They were bright as ever, but strangely low down towards the horizon, thus intimating to us that we were far from home. And now the

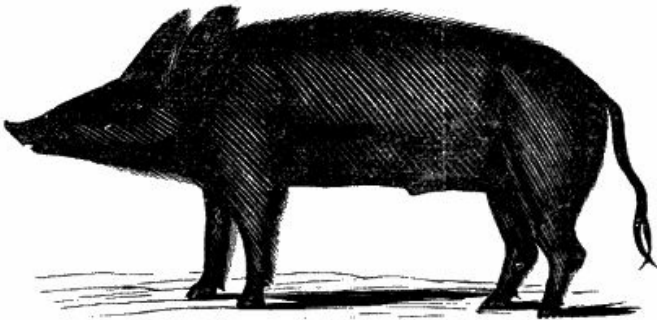
water broke from our steamer's bow in waves that sparkled with phosphorescent light. It was a novel sight to a landsman. This morning the day broke bright and clear, and we threaded our way among the rocky islands as soon as there was light enough to find the channel, and tied up to the pier at Cedar Key. It was an unusual thing, so said our captain, for him to reach Cedar Key in time to connect with the morning train; but we were fortunate.

The village of Cedar Key seems to be a very small, quiet, dreary sort of place, whose most conspicuous objects are two hotels, on one of which we could read in large letters the words "The Swanee." At once there came floating through the memory the long forgotten

'Way down upon de Swanee ribber,
Far, far away;
Dere's where my heart is turning ebber,
Dere's where de old folks stay.
All up and down de whole creation,
Sadly I roam,
Still longing for de old plantation,
And for de old folks at home.
All de world am sad and dreary,
Ebery where I roam;
Oh, darkeys, how my heart grows weary,
Far from de old folks at home.

We had little opportunity to examine this little place, built upon an island, the gulf terminus of the Florida Transit Railway, for our train was soon at the wharf to receive us, and we were on our way again. We afterwards learned that on one of the pretty islands that stud the entrance to Cedar Key, the Faber Brothers have a saw mill and machine shop which give employment to quite a colony in preparing cedar wood for the well-known Faber lead pencils.

The country through which we passed for some time after leaving Cedar Key was mostly covered with tall pines of very slender growth, without branches save just near the top. The variety seemed to be *Pinus australis*, and the wonder was how such slender trunks could stretch away so high without toppling over. The soil had the appearance of being little else than pure, white sand. Here we had our first view of a Florida hog, an animal that we saw very frequently during our short sojourn, and of whose feats, in slipping through small cracks in a fence, we heard some surprising accounts. We here present you with a portrait of this singular animal taken for us by a capital artist, who has produced a striking likeness. Perhaps you may be disposed to import a small herd for the improvement of your Berkshires and Suffolks in the points of excellence for which this Florida hog is famous.



FLORIDA HOG.

WHAT OUR READERS SAY.

I have received the *Canadian Horticulturist* the past year, and found in its pages many articles which are both interesting and instructive on Fruit, Flowers, Vegetables, etc. It should be in the hands of every man who takes an interest in Horticulture.

JAMES ROGERS,

Eversley.

All my apple trees have done well, all my pear trees except Clairgeau have done very well. Clapp's favourite has fruited two years, fruit large and very fine. Grape vines have not done very well with me. Burnet I think is tender, no fruit on any of them yet. Saunders raspberry I like very much; my *Paniculata* has done well; Mr. Lotan's plants have done reasonably well, his Ontario apple tree fruited, size medium, quality good, keeping qualities not tested yet. Report fuller next time.

JOHN MCINTYRE,

Appin.

I am now a subscriber to six newspapers, and were I compelled to give up all but one, that one would be *The Horticulturist*. I consider this one of the best investments a Fruit Grower or Gardener can make.

I heartily wish you every success.

J. H. WISMER,

Port Elgin.

I was years wishing to become a member of the Fruit Growers' Association, and now that I have become a member and seen the advantages, I regret not having become one fifteen years ago, at which date I commenced to take an interest in fruit-growing as an amateur.

GEO. MITCHELL,

Perth.

We had a very bad summer for frosts, which has totally destroyed the cranberry crop, but blueberries and raspberries were very good. I must tell you that the Wealthy apple tree, I got from the Association has made a fine growth this year, and I am in hopes it will stand our winter. I may say here I have had bad luck getting the plants distributed, as they have missed getting to me three out of the four years, but I have been more than paid by *The Horticulturist* and the Annual Report. I am in hopes of getting our mails carried here by railway by another year, and then our mails will be carried more promptly.

W. WARNOCK,

Blind River, Algoma.

FENCES.

The agricultural community in Florida are fully alive to the importance of the fence or no fence question. Our exchanges from that state are full of communications on that subject, and the more it is discussed, the more clearly does it appear that the system of highway fences is an unnecessary and unjust burden upon the farmer, gardener, and fruit-grower. One writer in the Florida *Dispatch* says:—I have fifteen acres under cultivation. It requires one mile and a quarter

of fencing to fence it. This costs \$320.

I pay yearly on this fence for State, County, and City tax, as an <i>improvement</i>	\$ 8 00
Interest on cost of fence 10% per Ann.....	32 00
Sinking fund for renewal once in eight years.....	40 00
Repairing and whitewashing yearly.....	15 00
	<hr/>
Yearly expense of maintenance.....	\$95 00

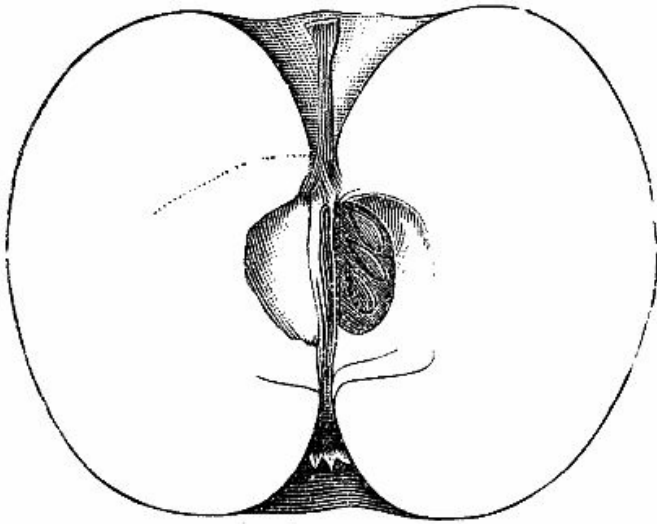
If our cultivators of the soil in city, town and country would only sit down and make a calculation of their annual outlay for fencing against other people's cattle, we feel confident they would not long submit to the unjust burden. Why should I be allowed to turn my cattle upon the highway at your expense? What right have I to put you to the expense of building and maintaining miles of fencing to protect your crops from my cattle? Is it any injustice or hardship that I should take care of my own animals, and not suffer them to injure my neighbour?

The Committee on Fences reported to the Fruit Growers' Association, see page 27 of Report for 1882, that the cost of fencing a farm of one hundred acres, divided in the usual manner, is \$1,317.

The annual charge for maintenance is for interest at 6 per cent. on say \$1,300.....	\$ 78 00
Cost of repairs, and sinking fund for renewal, once in twenty-five years.....	78 00
Cost of same for gates renewed every ten years.....	9 60
Rent of land occupied by fence at \$5 per acre.....	21 80
	<hr/>
Total annual expense.	\$187 40

Now this estimate was prepared under the advice of a thoroughly practical farmer residing in East Whitby, County of Ontario, and may be safely taken as a fair average calculation. In twenty years the fencing alone will have cost as much as many a hundred acre farm is worth.

But apply this to the country at large, and see to what extent the tillers of the soil are taxed by the unjust and unnecessary system of fencing that now prevails. The Township of London, in the County of Middlesex, having a cultivated area of seventy thousand acres, pays an annual tax for fencing of over \$100,000; and the total loss to the agriculturists of Ontario who cultivate her nearly twelve millions of acres of cultivated land is not less than sixteen millions of dollars every year. How long will our people be content to bear this unnecessary burden?



THE CANADA BALDWIN.

It is believed that this apple originated in the orchard of Alexis Dère, St. Hilaire, Rouville County, Province of Quebec. R. W. Shepherd, jun., of Como, says it is of the Fameuse type, and that his trees, six years planted, have proved quite hardy and productive; also that it does well on heavy soils. The tree is a vigorous, thrifty, upright grower, begins to bear when young, and produces alternately heavy and light crops. The fruit is handsome, of only medium size, oblate in form, the skin white, thickly striped with red and splashed with crimson. The flesh is very white, tender, fine grained and juicy, with a peculiar mild subacid flavor. It is in use from January to April. Mr. Shepherd says it is "one of the best of keepers." Mr. Chas. Gibb, of Abbotsford, Prov. of Que., says of it, in the fifth report of the Montreal Horticultural Society, page 86, that there is no bright red apple of fine quality, good size, and a long keeper, that can at all approach it in general satisfactoriness on the heavyish soils of North Shefford. He adds, that on the warm quick soil of Abbotsford, the early rising of the sap tends to sun-scald and premature decay, yet that notwithstanding this defect, they must plant it because they have no other to take its place, while on heavier soils he expects it to become widely popular. In the fourth report, page 120, he says the tree is of undoubted hardiness, and that in cold, and even wettish soils, where Fameuse placed alongside have died, it is a success both in trees and fruit. Dr. Hoskins, of Newport, Vermont, says of it, "productive, fruit of very good quality, and well adapted for transportation, a good keeper, and attractive. Faults, want of size, and lack of adaptation in the tree to any but heavy soils."

Because this apple seems to be likely to be of value in the cold north, the Directors decided to offer a yearling tree of this variety to such of the subscribers to the *Canadian Horticulturist* as would like to give it a trial. Those who reside in the portions of our country where only very hardy fruit trees can be successfully grown, may find it a profitable sort.

The accompanying cut will give our readers a good idea of the size and form of the Canada Baldwin.

FRUIT IN 1883.

The following account of the fruit crop, for 1883, is taken from the Agricultural Return, published by the Ontario Bureau of Industries for November of that year.

The importance of the effort now being made to introduce the hardy fruits of North Eastern Russia in order to supply the northern districts of the Province with trees that will endure the severe winters of that region, is made very apparent in the closing paragraph of the report given us by the Bureau of Industries.

The Bureau returns state that fruit of every kind in the Lake Erie counties has, this year, given a very poor account of itself. At first the long cold spring retarded growth; then came a succession of heavy rains with chilly east winds, which almost entirely stripped the trees of their blossoms. The result was a fine growth of healthy wood, and a very meagre crop of very poor fruit. Most counties did not raise even enough apples for home consumption; and most of the little they had were scrubby, spotted and wormy. Peaches, though not such a dismal failure, were by no means satisfactory; there were a few good bearings, however, near the lake shore in Norfolk and Elgin. The old demon of the plum tree, black-knot, has this year played havoc with cherry trees also; and the plum crop has suffered almost complete destruction from the other enemy, the curculio. Frost, cold and mildew have greatly reduced the grape yield. It is worth noting that fruit trees sheltered from the east winds generally bore well.

The Lake Huron counties had a surplus of apples for export, some of which were shipped at Seaforth to Manitoba. Plums suffered severely from the curculio in Lambton, from black-knot in Huron, and from September frost in Bruce; still there were good surpluses in many localities. From Bruce comes a complaint of a blight that attacked the trees in July, causing the leaves to drop off.

A similar blight was very injurious to plums and pears in the county of Grey. Frost also did considerable damage in the southern townships. The curculio was active in Simcoe, yet in the two counties there was a fair surplus of plums. Apple trees, though healthy, blossomed late, and the crop was generally light. Grey, however, showed a good surplus—between Meaford and Owen Sound some 6,000 barrels having been exported.

Throughout the West Midland district fruit trees generally are healthy, and have made considerable new wood during the season. Cherry trees in the western counties have almost completely succumbed to the assaults of black-knot. In Perth and Wellington fruit of all descriptions is very scarce. Portions of Middlesex and Oxford have grown a small surplus of apples. Brant has a sufficiency of all fruits, except cherries. Dufferin has a surplus of plums, but late fruit in this county was somewhat injured by frost.

This year has been a decidedly lean one for fruit in the Lake Ontario counties. The principal cause of failure elsewhere—the cold wet weather of the blossoming season—operated fatally here also. Prince Edward has been the most fortunate county of the group, yielding a surplus of apples, pears and plums; and some localities near the lake in other counties have done fairly well. In South Ontario plums, pears and small fruits have been moderately plentiful. Plums, indeed, have shown a surplus in nearly all the counties of the group; though black-knot has been highly destructive of trees in Peel, Halton and Wentworth. But apples are very scarce everywhere, and are blighted and wormy. Grapes are a poor crop; they failed to ripen, owing to frost and mildew. Lincoln is the only county that produced a surplus of peaches. The wet season, while so injurious

to fruit, was conducive to a strong, healthy growth of young wood.

The St. Lawrence and Ottawa counties tell the same story of failure, from the same general cause—the cold, wet spring, and the shortness of the ripening season. Plums are the only fruit in surplus, and these chiefly in the western counties of the group. The apple crop is very light; in some northern localities the fruit was attacked widely with black scab. Seedling apples are said to have succeeded better than grafts. A severe early frost destroyed many grapes, and most of what remained failed to ripen owing to the shortness and coldness of the season.

Fruit trees in the East Midland counties are healthy and are growing well, but the fruit is precarious. Plums and crab apples are the only kinds produced in surplus. Black scab is very injurious to apples.

Few and feeble are the attempts made at fruit-growing in the Northern districts; the trees cannot, as a rule, stand the severe winters. Crab apples yield plentifully, but there is little of anything else.

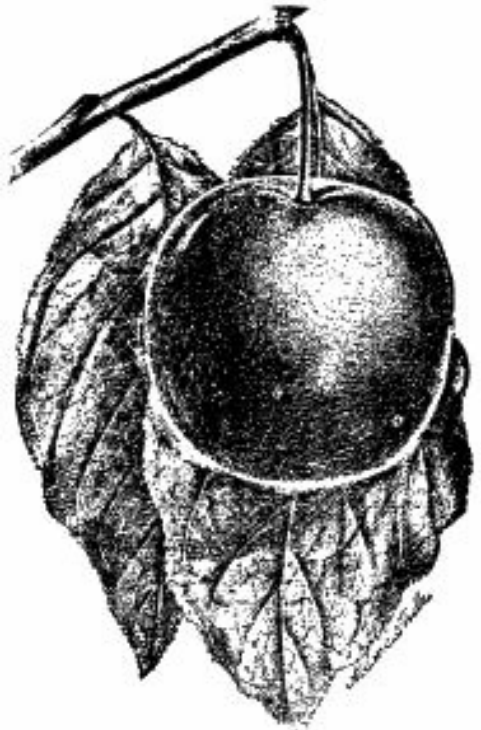
THE MARIANNA PLUM.

As attention is being directed to the best varieties of the native plums, because of the greater hardiness of the trees and their consequent ability to withstand the extreme cold of northern latitudes, we copy from the Farm and Garden the following description of another new sort:—

This new fruit is an accidental seedling. Tree, a rapid and uniform grower; straight stem; lower branches nearly horizontal, and becoming more upright towards the top, forming a compact and symmetrical head. It never suckers and is entirely free from insects. Fruit round, a little larger than the Wild Goose; rather thick skin, a deep cardinal red when fully ripe; stone small and fruit of fine quality, persistent, and not liable to be blown off by high winds. Ripens two to three weeks before the Wild Goose, and continues in fruit three to four weeks.

This fruit is entirely free from the ravages of the curculio and other insects; bears uniformly heavy crops in all seasons.

We believe it originated in Texas. Whether it has yet been tried in very cold latitudes, we are unable to say.



THE CABBAGE WORM.

If you consider the following worth space in your publication you may give it to your readers. I have seen so many plans for killing the cabbage worm, and tried them, none come up to this simple and effectual remedy. Take air slack lime, finely powdered, dust it on the cabbage; it will run down the leaves to the stalk, and no more grubs will be seen for some time. If they do appear again, another dose will not be hard to apply, won't hurt the cabbage if not too heavily applied. Road dust has been recommended, but if limestone was not in the road dust it is useless. I have no hesitation in saying, air slack lime is the best thing to put on cabbage. I tried it, and want no other remedy.

ROBERT KENNEDY,

Bethany.

HARDY PEAR TREES.

Dr. Hoskins, of Northern Vermont, writes to the *Rural New Yorker*, that the Flemish Beauty has proved as hardy with him as the Snow Apple tree, and that Clapp's Favourite Pear is yet more hardy. The Onondaga, also, he has found to be hardy. The two last mentioned had passed through five hard winters without the loss of a single bud. Beurre d'Amanlis also has proved itself a very hardy tree.

SUNFLOWER SEED.

Doctor Sturtevant, of the New York Experimental Station, has been experimenting with sunflower seed, with the following results:

The station crop of 1883 occupied a plot of 1-20 acre area, and was planted four kernels in a hill, the hills forty-two by forty-four inches apart, and was cultivated during growth the same as corn. The soil received at the rate of 400 pounds of superphosphate to the acre. Planted May 18th, vegetated May 31st, harvested in September, and the seed beaten out and measured, and weighed October 25th, the yield being two and one-half bushels, or fifty-seven and one-half pounds; expressed in acre yield, fifty bushels, or 1,150 pounds, the seed thus weighing twenty-three pounds per struck bushel. An inspection of the growing crop made it quite evident that thicker planting would have been productive of a larger yield.

From not having facilities at the Station for expressing the oil, we must be content with the results of analysis. Dr. S. M. Babcock found the seed to contain 20.52 per cent. of oil in the air-dry seed. One hundred seed in air-dry condition weighed 187.7 grains, and contained 49.1 per cent. of husk and 50.9 per cent. of kernel. The complete analysis is below:—

	AIR-DRY.	DRIED.
Water	12.68	
Ash	3.00	3.43

Albuminoid (N. \times 6.25.)	15.88	18.19
Crude fiber	29.21	33.45
Nitrogen-free extract	18.71	21.43
Fat (ether extract)	20.52	23.50
	<hr/> 100.00	<hr/> 100.00

The sunflower crop, however, has difficulties in the way of curing. As the plant ripens late in the season, the heads must be placed under cover to prevent waste, and they contain at this stage much water. We dried our crop by spreading the heads upon a floor, without piling, and as some of the seeds were sufficiently dry they were shelled out.

As this has been a very late season it is possible that in a more favourable year the seeds might be shelled off at the time of harvest.

THE ATLANTIC STRAWBERRY.

This is what *The Farm and Gardener* says about this new strawberry. It is interesting to note the opinions of editors who have been favoured with a taste.

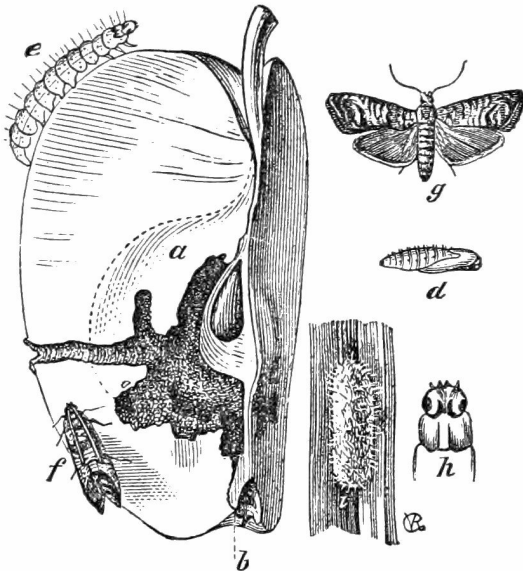
Wm. F. Bassett, of Hammonton, N. J., brought to us some specimens of his new seedling strawberry, the Atlantic. It is indeed a fine berry, with perfect blossoms, ripening about a week later than Wilson, larger and of a long, conical shape. Its most attractive points are its brilliant, rich colour, shiny surface, sweet and fine flavour. It is claimed to carry well, and a minor point in its favour is its bright green hull, which is attached so firmly that it does not pull out in picking. The vine is a vigorous grower, and productive.

CRYSTALLIZED FRUIT.

Messrs. Bernard & Benedict, of Los Angeles, California, are making a speciality of Crystallized fruit.

The fruit, whether white figs, black figs, oranges, pears, peaches, or other fruits—those being the principal ones used—is first relieved of its skin and sliced, after which it is placed in trays to dry a little. Next they are dipped in water in which sugar is dissolved, then placed on trays of wire gauze, and put in the place where they are dried and become crystallized. It takes two or three days to complete the process, as they are subjected to a slow heat in order to make them as nearly perfect as possible; and they are nearly so. The arrangement of the drying apparatus was invented by the proprietors, is admirably arranged and heated by coal-oil stoves in zinc partitions underneath, by which the heat is thoroughly regulated.—Los Angeles *Herald*.

THE CODLIN-MOTH AND THE CURCULIO.



CODLIN MOTH.

(g) Moth with wings expanded. (f) Moth at rest. (e) Full-grown worm. (d) Chrysalis. (h) Head of worm magnified. (i) Cocoon.

It was asked at a recent Horticultural meeting in Michigan, whether it would pay to spray the apple and plum trees with Paris-green or London-purple for the purpose of preventing the ravages of the codlin-moth on the apple, and the curculio on the plum. In reply to this Mr. Cook stated that he had experimented on plum trees by spraying with Paris-green and water, and that he found no curculio on those trees for several days after making the application; while on surrounding trees he could find plenty. Prof. Beal had said that the codlin-moth could be destroyed in the same way. That the moth deposits its eggs in the blossom end of the young fruit, and that the worm, as soon as it is hatched, eats the poison and is killed.

Allan Brunson spoke of a friend of his who saved his apple crop by the use of London-purple, while his neighbours had no apples. Mr. Cook cautioned fruit growers against the canker worm next spring, and stated that they could be exterminated by spraying with Paris-green or London-purple.

Mr. J. M. Eamans said that Prof. Cook, of Lansing, recommended a teaspoonful of Paris-green to a pail of water.

BEST MELON FOR MARKET.

By THOS. D. BAIRD, GREENVILLE, KY.

In buying melon seed to raise for market there should be three points considered—size, quality, and productiveness. Select the variety that has the largest share of these good qualities combined. A melon may be of the largest size, but may bear so few melons to the vine that they cannot be grown at a profit, at least not as profitable as some not so large in size. Again the quality may be so poor that they may be a drug in market. Or a variety may be very productive, but so small that but few will be fit for market.

After several years experimenting with different varieties I find the following varieties combine the most good qualities:—

Shumway's Silver Netted Canteloupe is of fair size, very productive, thick, green flesh and a most delicious melon; but its market value is not equal with the Bay View, a new melon. This fine melon occupies an enviable position in the list of luscious melons. It is by far the finest flavoured melon I ever ate of its size. Flesh deep, deliciously rich and sweet, of a green colour; skin russet colour, very handsome and attractive in appearance. But for *size* and *thickness* of flesh, I have never seen anything of the melon tribe equal to the Montreal Green Nutmeg. The

fruit with me was nutmeg shape, deeply and regularly ribbed, skin green and densely netted, flesh green, rich, and delicious. For a small melon I have never seen as heavy nor as delicious a melon as Burpee's Netted Gem. I would advise a trial of it believing it will please.—*Farm and Garden*.

IMPROVING FARM HOMES AND GROUND.

The immediate surroundings of farmers' homes generally are far from being as attractive in appearance as they could easily be made. Indeed the rural front yards are, as a rule, much less beautiful and interesting than those of people in the same general circumstances in towns and cities. In the latter, lawns are well cared for, and choice ornamental trees, shrubs, and flowers, are much oftener met with than about country homes. There is no valid reason for this. Such embellishments are not more easily acquired in the city, but just the reverse. The farmer has teams, implements and manures for putting the house grounds in the best condition for ornamental treatment; labor is quite as cheap as in town, while sodding a lawn costs far less in the country. Trees and plants are as cheap to the farmer as to any one, while in many places some of the best kinds of ornament can be had from the woods for the digging.

There may be points in which life on the farm lacks the attractions common to town life, but in charming home grounds the farmer is certainly to blame if the city dweller excels him. It is often wondered why country life has not charms sufficient to hold the boys to the farm, and that they grow up longing for the city. If more attention were given to making their home surroundings more cheerful and attractive for the sons and others of the family, there would be less heard of this trouble. And in all such work every proper effort is sure to be seconded by the wife; while nothing is more natural than for the children to be enthusiastic helpers in this work. Such improvements of course require some outlay, but this can hardly prove otherwise than a good investment. Every dollar judiciously spent in this way will soon be returned many fold in the increased valuation of any place, should it be desirable to sell, to say nothing of the greater happiness and love of home that will thus be inspired.

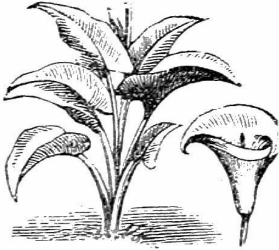
Now that long evenings are at hand, this subject should receive due consideration. Plans may be drawn up for an improved arrangement of walks, drives, flower beds, shrubbery, borders, and other matters. Every detail of these can be decided upon, and entered upon a map, long before winter is over, so that when spring opens the work can go on intelligently and to the best advantage.—ELIAS A. LONG, Architect, in *American Agriculturist*.

GRAPES AND TEMPERANCE.

Grape juice is so scarce, that out of the State of California the adulteration of wines is almost universal in our country. Recipes for making wine of any brand, and of any age, without a drop of grape juice, are well known to some wine dealers. The prohibitionists, from Maine to California, and from the Lakes to the Gulf, want more vineyards and more grape juice, and welcome grape culture as well as all other fruit culture, as a powerful adjutant to their reform. When the villagers and the rural cultivators can literally sit under their own vine and fig trees, when the tempting clusters of the vine in the fresh state, are upon the poor man's table for six

months in the year, when grape juice in its various preparations is among the family stores in every household, the enticements of the grog shop will have lost many of their charms.—*American Agriculturist*.

THE CALLA LILY.



Planting out *Calla Æthiopica* in summer needs only one trial to prove its superiority to keeping it in pots, for even the smallest single crowns put out in May or June develop into fine sturdy plants by September. It is such a strong rooting plant that it will succeed in any fairly good soil, and good plants even when out of flower are ornamental. For general purposes single crowns are best, but large specimens for entrance halls or conservatory decorations are desirable, and few plants last longer in good condition in unfavorable positions than this *Calla*.—*The Garden*.

WOOD ASHES.

Wood ashes are one of the most valuable fertilizers that a farmer can apply to his soil. Ash from the wood of the beech is said by chemists to contain 96 lbs. of potash, 33 lbs. of lime, 6 lbs. of magnesia, 3 lbs. of phosphoric acid besides sulphuric acid, to the bushel of 60 lbs. From this it will be seen how great their manurial value is. For root crops of all kinds, grasses, clover, etc., they will be found just what is needed to stimulate and feed the crop. The ash is the mineral element of any vegetable structure, and therefore indispensable to its growth. The farmer who will sell his ashes, is actually parting with so much of the fertility of his farm. As an application to reclaim marsh land, the effect of ashes is often wonderful. The burnt lands in the Huron peninsula will have their productiveness greatly increased by the burning of the forests that covered them; and farmers there will receive great benefit in the future from the clearing of the lands and the depositing of the ashes from the burned forest upon them.—*Michigan Farmer*.

THE WAX PLANT. (*Hoya carnosa*.)

Next to the English Ivy, I know of no climbing plant better adapted to culture in ordinary living rooms than the *Hoya*, or Wax Plant, as it is more popularly known. It grows rapidly, has fine foliage, blooms profusely, and has beautiful flowers, and is easily kept clean, because its thick, leathery leaves can be washed as well as so many pieces of china, with much less danger of breaking them, and its stems are very tough, so that there is but little danger of damaging them in taking down the plant and putting it up again whenever a bath is given it. If it is trained where it

is convenient to get at the leaves, it will not be necessary to take it down in order to give it a washing. The only insect that has ever troubled my Hoya is the mealy bug, and I exterminated him by persevering warfare with a hair pin, ruthlessly dislodging the little pest as fast as he found a new location.

You will often see inquiries in papers to this effect: My Wax Plant is a year or two years old, and doesn't grow. Can you tell me why? Perhaps Hoyas take to growing only when they become well rooted, and perhaps it takes most of them a year or two to get in that condition. I don't know how that is, but I know that I have owned three, and I have never had one make much growth before the second year. I have always raised my plants from cuttings, taken from half ripened wood. Each cutting generally has three or four leaves attached. These cuttings I have struck by inserting them in sand kept wet and warm. The roots will make their appearance in two or three weeks, and in a month or six weeks I pot the plants in a soil composed of one-third leaf-mold, one-third garden soil, and one-third turfy matter from under old sods, with a handful of sand added to each six-inch pot. Usually, the Hoya plant will put out a few new leaves, just enough to show you that it is alive, but I have never had my young plants send up any stems until the second year. When they do begin to grow, they grow very rapidly. My last plant began growing when it was about eighteen months old, and sent up eight stems which averaged eight feet in length in less than five months.

The stems will twine about a string or wire, and need but little training. Whatever support you give them must be quite stout, for a branch with a good many leaves on it is heavy.—*The American Garden*.

A THOUSAND CLUSTERS OF GRAPES FOR ONE DOLLAR.

On one of these vines we have just counted two hundred and forty-six bunches of grapes, nearly all fine ones, and the dwellers tell us, "a great many have already been picked and eaten." A whole row of hanging clusters still fringes the upper front of the piazza; the cross trellis is black with them, and they abound by the bushel along the border trellises and fence. There are not less than two thousand fine bunches in all. The annual cost of having these vines trimmed and trained, and putting on a dressing of bone dust, does not exceed two dollars, which is ten-fold repaid by the shade, and the green foliage to look out upon during all the parching days. We might have headed this: "A thousand clusters of grapes for nothing!"

A grape-vine will grow anywhere that it can get a small foot-hold in a bit of soil; it will run up on anything that its tendrils can cling to; it will help itself to sunlight and food from the air and earth. If you have a yard of ground plant a grape-vine on it, in city, village, or country. Do it now, or certainly next spring.—ORANGE JUDD, in *American Agriculturist*.

SULPHUR FOR MILDEW, PEAR BLIGHT AND YELLOWS.

Professor D. P. Penhallow, writing to the *Country Gentleman* on the effects of sulphur upon plants, states that its well-known value in averting the development of mildew is due to a slow process of oxidation resulting in the formation of sulphuric acid. The fungus is killed by this process of oxidation in the sulphur when in contact with the parasitic plant, and by the formation

of sulphuric acid. But he argues that the sulphur must first be changed into sulphuric acid and then unite chemically with some base, as potash or soda, thus forming a soluble salt that can be readily absorbed by the plant, in order to be brought into the general circulation of the plant. That in this form it does enter plants and perform important functions as a medical agent, it being probably sulphuric acid in combination with potash that acts as a curative in pear blight, so that perhaps sulphur, as sulphate of potash, is the specific for pear blight, while careful experiment seems to indicate that chlorine, as muriate of potash, is the specific for peach yellows. And adds: In any case, a vigorous tone in the general system, as developed by proper food and care in cultivation, will do fully as much good as any other method of treatment applied separately, and one of the finest evidences of this was found in the case of a vineyard which, although seriously mildewed, was able to withstand the attacks of the fungi and produce a fine crop, by reason, solely, of the special cultivation and application of fertilizers which had been given it. Internal applications, therefore, do not directly act upon the parasites, but by toning up the system, render their excessive growth improbable.

THE CARP AS A FOOD FISH.

There is much inquiry concerning the German Carp introduced into this country by the United States Fish Commission. People want to know where it will live, how fast it will grow, and generally what it is worth now that we have it. Often as these questions are answered they come up again, and in truth, the different results reported are confusing unless accompanied with an explanation. Carp are not a first class table fish, but they are immensely superior to no fish at all, when a fish dinner is wanted. They are not as good to eat as the bull-head for instance, but then it may be said that the bull-head is a very excellent fish when well understood. So the Carp can be made a toothsome feature of the dinner table, if the mistress of the kitchen comprehends the mysteries of the sauceboat. Without that skill, which by the way is universally possessed by our adopted German fellow citizens, and can be learned from almost any of them, the carp is rather tasteless. In very cold spring brooks carp will not grow at all. They rather seem to shrink, if we can imagine a fish shrinking with the cold. But in warm waters, especially in the Southern States, where there is no trouble with frost, they attain an enormous size quickly. There have been instances of their growing to seven pounds weight in two years, which far surpasses anything known of any other species of fish. In the North, if the ponds have hard bottoms and freeze their entire depth, the carp will be killed. But if the bottom is soft and muddy they will burrow into it and protect themselves. They are said to feed on vegetables, either the natural growth in the water, or the refuse from the garden, but I imagine they are greatly improved by an occasional taste of the numberless insects that are found on all aquatic plants. The same rule applies to them that is found to govern in all other departments of nature; the best is always the hardest to get. Not only will carp never supply the place of trout, but they will hardly live in the same water. They need little care, and will exist on poorer food, are content in less fine water, and they are in the end an inferior fish. The common proverb says that whatever is worth having is worth working for, and that, translated into fish literature, means that an ordinary variety is more easily maintained than a superior one. Still there is always more need of the lower class. Few men eat trout, more eat shad, and infinitely more use cod, while the ponds that are adapted to trout, are not as one in a hundred to those fitted for carp. Any old sluggish pond, above a mud-hole, will answer for them. In conclusion, it is almost self-evident that carp are no more a game fish than a fattened hog is a game animal. Carp can generally be procured through the State Fish

Commissioners, and several breeders offer them for sale.—ROBERT BARNWELL ROOSEVELT, in *American Agriculturist* for January.

DOUBLE-FLOWERED GOLDEN FEATHER.

The pretty lace-leaved Golden Feather, usually called *Pyrethrum aureum laciniatum*, has proved with us to be the best white flowered bedding plant we have. Without any attention, it has been a dwarf and compact mass of white flowers the whole season, and the flowers are so freely produced that one can scarcely see the foliage except at the margin of the beds, where the pale, lemon-coloured leaves make a pretty fringe. I am by no means enraptured with Golden Feather, seeing it is so overdone in many gardens; but white flowers have so softening a character amongst brilliant summer blossoms, that any plant is welcome which produces them freely, and I feel sure that any one giving the double *Pyrethrum* a trial—not as a foliage, but as a flowering plant—will be well satisfied with it. It keeps sending up a continuous succession of flowering shoots from the base in such a way that a dense mass of double button-like flowers is produced the whole season. It is as easily raised from seed or by division of the old plants as the ordinary form; but whereas old plants are of very little service in a fine-foliage point of view, from their running up to flower so persistently, in this case they are very useful. In a cut state this plant is also serviceable. The shoots average from 9 inches to 1 foot in height; and, as white flowers are so effective in all kinds of floral decorations, a plant that produces an unfailing supply is ever welcome, whether for beds or borders.—*The Garden*.

TAKE CARE OF YOUR ORCHARD TREES.



FIG. 1.

When the owner visits his young orchard after the snows have melted away in spring, he often makes the disheartening discovery that many of his trees have been girdled by mice or rabbits. Judging from our own correspondence, the damage by these animals must in the aggregate be very heavy.

The first thing to be done is to examine the extent of the injury. Frequently it is not so bad as it looks, and the inner bark is not entirely removed. If this covers even a fourth of the wounded portion, and connects the bark above the wound with that below it, the chances are that the wound will heal if drying can be prevented. The ordinary grafting wax, applied on old, worn cotton cloth, or on paper, as used in grafting, should be applied over the injured portion. This, especially on quite small trees, will prevent all evaporation. Another application is the old grafting clay, made by thoroughly mixing and beating together stiff clay with half as much cow manure. Apply this over the wound quite thickly, and fasten it in place by wrapping with an old cloth and tying with strings. If the inner bark is completely gone, nothing remains but to bridge over the wound with scions, and thus restore the communication between the roots and the top. The scions may be taken from the same tree if they can be spared, or those from another of the same kind will answer as well.—*American Agriculturist*.

Figure 1 represents the tree completely girdled and the inner bark removed, and figures 2 and 3 shew the manner in which the girdled portion is bridged over with the scions.



FIG. 2.

CHINESE FARMING AROUND SAN FRANCISCO.

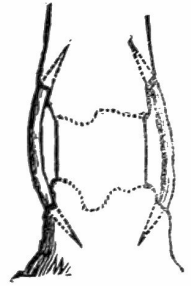


FIG. 3.

The Chinaman began his usefulness as a market gardener in and around San Francisco nearly thirty years ago, in the days when the Americans had greater treasures to dig for in the earth than vegetables. Men enjoying the prospect of turning up a gold mine with their spades, were not likely to apply them to a potato patch. Yet these men had to eat, and others, not above the humbler occupations, worked to feed them. The first of the Chinese vegetable farmers thrived so well that other compatriots followed suit, and the housewives of San Francisco soon became familiar with the queer yoked figures and their heaped-up baskets, who announced their coming with a shrill cry, not unlike that of a New York milkman. At first each farmer made his first day's trade on the contents of two baskets. Then the more enterprising hired men to carry additional supplies. The farmer himself always led, and still leads, the van in these processions, which number from two to a dozen men. He carries the same burden as his hired hands, and does the bargaining for them; and as their baskets are emptied they are sent to the rear, instead of back to the farm to work. The procession leaves town as it entered it, in single file, while the usual chatter is still continued, as if keeping time to the pattering of their slipshod feet.

The business has expanded until some Chinamen now come in daily with several wagons or droves of pack donkeys; but the majority of them continue to do business on a moderate scale because lacking the means to amplify it.

The Chinaman farmer lives on the most economical basis, and does his cultivating on strips of waste land, by roadsides, and on hillsides so abrupt and naturally sterile that the white man never dreams of utilizing them; also down in ravines and gullies which he had to reclaim from the original wilderness. We remember one Chinese farm in a deep and once savage gully, which used to be the bed of a creek that the spring floods transformed into a furious torrent. On one side, the railroad passes over a steep embankment; on the other is an abrupt and rocky bluff. By damming the creek at the head of the gully and diverting the water down the hill range of which the bluff is a part, the ingenious Mongolian has turned the bed of the ancient torrent into a productive farm, and so fertilized the barren slope that he can raise a crop upon it also. He utilizes every available foot of ground. He will even build his house on piles over a creek, or on stilts beside an embankment, in order to save surface soil he finds so precious.

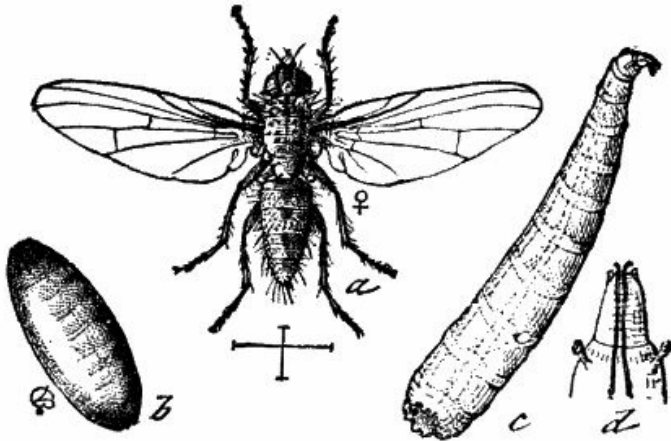
All his farm work is done by hand, usually on the methods of his native country. His vegetable farms are as neat and trim as the great flowerstudded gardens of the millionaires whose tables he helps to supply. He has, apparently, measured the productive capacity of the earth to an inch, and crams more into a given space of soil than would seem credible but for the fact itself.

His system of cultivation seems to be as mathematical as his calculation of the resources of his plot. He measures the ground in feet and inches instead of by acres and roods, and allots spaces to his beans, potatoes, peas, tomatoes, cabbages, etc., in proportion to the demand for them; and he never cultivates anything for which there is not immediate call. Wheat, grapes, and fruit do not seduce him, they require too much space and care; the competition in them is too great, and the market too fluctuating. He works not for the whole world, like the farmers who

have made the State famous, but for a single city whose denizens must have a certain amount to eat each day. So his venture is a sure one, and only a rare convulsion of nature can impair his prosperity. An earthquake, or a landslide, or a season of heavy rains, may cut into his profits, but the climate is so friendly that it soon repairs the ravages. His crops are perennial, too. When one product is not flourishing, he manages to have another that is in season, and he thus keeps busy all the year round.—A. TRUMBLE, *American Agriculturist*.

THE CABBAGE MAGGOT.

One of the first things that the newly-fledged market gardener invests in is an early cabbage patch, and the less his experience, the larger is his plantation. Two of my horticultural friends have planted largely this spring, and the other day (the only sunny afternoon in two weeks) one of them came to me with a very sober and lengthened visage to inquire what ailed his cabbage; some small white grubs, or properly speaking maggots, were at work at the roots of his cabbages, giving no hint of their ravages until the drooping and withering of the plant gave evidence too late of the mischief that was being wrought. To see whole rows of cabbages that had reached their second hoeing, succumb to an unseen and apparently invincible foe was certainly discouraging, and I did not blame my friend for looking downcast, for he had considerable invested in time and manure and land.



ANTHOMYIA BRASSICÆ.

- a. The female fly magnified. The cross lines show the natural size.
- b. The Chrysalis magnified.
- c. The maggot magnified.

It seems that there is an extensive family which pass their maggot or larval life in preying upon our early vegetables. The family name is *Anthomyia*. The *Anthomyia raphani*, or radish-fly, is so nearly like the common house-fly, as to be easily mistaken for that ubiquitous individual. It lays its eggs at the crown of the young radish, and the maggots hatching therefrom work speedy devastation to the root.

A. *Brassicæ* is the cabbage-fly, and differs from *raphani* in being smaller and brighter colored. One writer says "it is found through the summer, and is the parent of a maggot which

has been known to lay waste whole fields of cabbages by diseasing the roots on which they feed, as well as the base of the stalk." Successive generations are feeding until November, the latter families lying in the pupa state through the winter, and probably some of the flies survive that season secreted in holes and crevices.

"When the cabbage leaves assume a leaden or yellow color and droop in mid-day from the effect of the sun, such plants being diseased should be taken up, carried away and burned, and brine or lime put in the holes. Gardeners in some instances have collected large quantities of the pupa by drawing away the earth from the roots."

The *Anthomyia* unlike house and blow-flies, dislike intense smells, and the means of their prevention or destruction is found in this fact. The radish-fly is prevented from depositing its eggs around the young plants, by sprinkling the bed with diluted carbolic acid at intervals of a few days. The method of dealing with the cabbage maggot is thus described by Prof. A. J. Cook:

"A small hole is made near the cabbage with a walking-stick or other rod, and about one-half a teaspoonful of the liquid—bi-sulphide of carbon—poured in, when the hole is quickly filled with earth and pressed down with the foot. In every case the insects were killed without injury to the plants."

The bi-sulphide of carbon is very volatile, and if not carefully corked will throw off vapour which readily ignites and explodes when brought in contact with fire. It will be seen that two different methods are used, that for the radish-fly being a preventive, the carbolic acid odor driving away the mother fly and preventing her from depositing her eggs.

In the case of the cabbage, the application is made to kill the maggot after hatching, or at the time of hatching, and should be applied at once to *all* the plants as soon as it is known or suspected that they are present. I do not see why a preventive cannot be used in the case of the cabbage *anthomyia* as well as others.

Those who have used superphosphates, especially the very strong-smelling sorts, claim that they are very obnoxious to all kinds of insect pests, and pay for themselves in this way for garden use. The cost of bi-sulphide of carbon is forty cents per one pound bottle. A druggist told me that one pound would make about 250 half-teaspoonfuls.—L. H. PIERCE, in *Ohio Farmer*.

DOUBLE ROSE-COLOURED MYROBALAN PLUM.

Here we have a hardy flowering tree which is likely to prove one of the most important introductions to our gardens of late years. It was, it seems, brought over to the last international exhibition at Paris by the Japanese gardeners who showed their products there, and was by them given to M. Baltet, of Troyes. M. Baltet thus writes concerning it: "This shrub, which is very hardy and vigorous, is covered early in spring with numerous large sweet-scented flowers disposed in thickly-set bunches. It is of good habit, the leaves tolerably large, being of a lively green, edged with bright carmine, the eyes and the leaf-stalks being coloured in the same manner. It flowers very early, three weeks before *prunus triloba*." M. Carrière observes "that this description fails to convey an adequate idea of the beauty and merits of this plant, and that the beauty, size, and fine colour of the rose-coloured flowers place this in the very front rank of hardy ornamental plants." This, though high, is doubtless well-merited praise, as its great beauty is supplemented by exceptional precocity, flowering as it does much in advance of all other kinds, a fact which will be sure to give it an important place amongst forcing shrubs, the more especially as it is of a vigorous, but at the same time very floriferous nature.—*The Garden*.

ONTARIO TREE PLANTING ACT.

As some of our readers have requested us to publish the law relating to tree planting we now give the same as passed by the Legislature of Ontario.

Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

1. This act may be cited as “The Ontario Tree Planting Act, 1883.”

2. Chapter one hundred and eighty-seven of the revised Statutes of Ontario is hereby repealed.

3. Section four of this Act shall not apply to any incorporated city, town or village, unless the council thereof first passes a by-law making the same apply thereto.

4. Any person owning land adjacent to any highway, or to any public street, lane, alley, place or square in this Province, may plant trees on the portion thereof contiguous to his land; but no tree shall be so planted that the same is or may become a nuisance in the highway or other public thoroughfare, or obstruct the fair and reasonable use of the same.

(2) Any owner of a farm or lot of land may with the consent of the owner or owners of adjoining lands, plant trees on the boundary lines of his farm or lot.

(3) Every such tree so planted on any such highway, street, land, alley, place or square, shall be deemed to be the property of the owner of the lands adjacent to such highway, street, lane, alley, place or square, and nearest to such tree; and every such tree so planted on the boundary line aforesaid shall be deemed to be the common property of the owners of the adjoining farms or lots.

(4) Every tree now growing on either side of any highway in this Province shall upon, from, and after the passing of this Act be deemed to be the property of the owner of the land adjacent to such highway, and nearest to such tree, shrub or sapling.

5. The council of any municipality may pass a by-law for paying out of municipal funds a bonus or premium not exceeding twenty-five cents for each and every ash, basswood, beech, birch, butternut, cedar, cherry, chestnut, elm, hickory, maple, oak, pine, sassafras, spruce, walnut, or white wood tree, which shall, under the provisions of this Act, be planted within such municipality on any highway, or on any boundary line of farms as aforesaid or within six feet of such boundary.

(2) Such by-law shall further provide for the appointment of an inspector of trees so planted; for their due protection against injury and against removal by any person or persons including the owner, excepting as authority may be given therefor by special resolution of the council; for the conditions on which bonuses may be paid; and generally for such regulations as are authorized by chapter one hundred and seventy-four of the Revised Statutes of Ontario, section 454 (16).

(3) Printed copies of the said by-law, together with sections four, five, six and seven of this Act, shall be posted throughout the municipality, and all claims made to the council under the provisions of the by-law shall be referred to the inspector to obtain proof of the same and report thereon.

6. The Inspector shall make to the council one report for each year, if required so to do, giving the names of all persons entitled to any bonus or premium under the by-law, the number of trees of each species planted, and the amount of bonus or premium to which each person is entitled, and certifying that the distance between any one tree and the tree nearest thereto is not less than thirty feet, that the trees have been planted for a period of three years, and that they are alive, healthy and of good form; and upon the adoption of such report the bonuses or premiums shall be paid.

7. The Treasurer of the Province, upon receiving a copy of the inspector's report, certified by the reeve and clerk, shall recoup to the treasurer of the municipality one-half of the sum paid by the municipality under the authority of this Act, the said copy to be forwarded on or before the first day of November in each year.

8. The sum of fifty thousand dollars is hereby apportioned and set apart for the object of the foregoing section, and shall be known as "The Ontario Tree Planting Fund."

9. Any person who ties or fastens any animal to or injures or destroys a tree planted and growing upon any road or highway, or upon any public street, lane, alley, place or square in this Province (or upon any boundary line of farms, if any such bonus or premium as aforesaid has been paid therefor), or suffers or permits any animal in his charge to injure or destroy, or who cuts down or removes any such tree without having first obtained permission so to do by special resolution of the council of the municipality, shall, upon conviction thereof before a justice of peace, forfeit and pay such sum of money, not exceeding twenty-five dollars besides costs, as such justice may award, and in default of payment the same may be levied of the goods and chattels of the person offending or such person may be imprisoned in the common gaol of the county within which the municipality is situated for a period not exceeding thirty days.

(1) One-half of such fines shall go to the person laying the information and the other half to the municipality within which such tree was growing.

10. The council of every municipality may pass by-laws:—

(1) To regulate the planting of trees upon the public highway.

(2) To prohibit the planting upon the public highways of any species of trees which they may deem unsuited for that purpose.

(3) To provide for the removal of trees which may be planted on the public highway contrary to the provisions of any such by-law.

REMEDY FOR MILDEW.

It is stated that an Italian experimenter named Giovanni Gazzotti, has found that by drenching the vine leaves and fruit with a solution of soda, in the proportion of two kilogrammes to each hectolitre of water, the mildew was completely destroyed, and the leaves and fruit became healthy, and grew naturally. A kilogramme is a little more than two pounds, and a hectolitre is about twenty-two imperial gallons.

THE TALLEST TREES IN THE WORLD.

It is usually considered that this epithet belongs, *par excellence*, to the famous "Big Trees" in California, variously known by the names of Wellingtonia or Sequoia. These are, however, far surpassed in height, and probably also in the total amount of timber in a single tree, by the real giants of the vegetable kingdom, the noble gum trees of the genus *Eucalyptus*, which grow in the Victorian State Forest, on the slopes of the mountains dividing Gipps Land from the rest of Victoria, and also in the mountain ranges north of Cape Otway, the first land which is usually "made" by any vessel bound from England for Melbourne direct. As will presently be shown

there are only four of the Californian trees known to be above 300 feet high, the tallest being 325 feet, and only about sixty have been measured that exceed 200 feet in height.

In the large tracts near the sources of the Watts River, however (a northern branch of Yarra-Yarra, at the mouth of which Melbourne is built), all the trees average from 250 to 300 feet in height, mostly straight as an arrow, and with very few branches. Many fallen trees measure 350 feet in length, and one huge specimen was discovered lately which was found, by actual measurement with a tape, to be 435 feet long from its roots to where the trunk had been broken off by the fall; and at that point it was 3 feet in diameter, so that the entire tree could not have been less than 500 feet in total height. It was 18 feet in diameter at 5 feet from the ground, and was a Eucalyptus of either of the species *E. oblique* or *E. amygdalina*. It should be noted that these gigantic trees do not, like their California prototypes, grow in small and isolated groves, towering above smaller specimens of the same or of closely allied kinds, but that, both in the Dandenong and Otway ranges, nearly every tree in the forest over a large area, is on this enormous scale.—*World of Wonders*.

THE YUCCA IN CALIFORNIA.

The Yucca or Spanish Bayonet, from which we have named our camp, is one of the most imposing flowers in the world. The plant itself is a bunch of bayonet-like leaves, stiff and sharp enough to inflict a painful wound, and 12 inches or 18 inches in length, growing close to the ground. Out of this cluster the single flower-stalk rises to a height of about 15 feet. The flowers are cream-white, about 2½ inches in diameter, pendulous on delicate stems in horizontal racemes which spring from the stalk in lengths so regularly graduated that the mass of blossoms present the appearance of a gigantic white oval, about 6 feet long and 2 feet wide in the middle, tapering gracefully above and below. The specimen erected in our Plaza when we named the camp has seventy racemes, each containing from ten to thirty flowers. This gives about 1400 or 1500 blossoms for each stalk, and they shed a heavy lily-like perfume, whose strength is commensurate with their grand proportions. These stately plants seem to be climbing precipitous mountains, and standing like sentries on the crest of the ridge. I am afraid it will seem prosaic if I add that the Yucca is good to eat. Mr. Albert Durer brought in the top of a young one which had not yet burst into flower. It looked like a stalk of Asparagus, four feet long and as thick as a man's wrist. The tender top, cut in pieces and stewed with cream sauce, made a pleasant addition to our dinner. It tasted something like Salsify and something like Artichoke, and a good deal like Yucca. I believe that it is a favorite dish with Spanish Californians.—*New York Tribune*.

BOOK NOTICES.

HOW TO BECOME A GOOD MECHANIC is intended to be a practical guide to self-taught men, telling them what to study, what books to use, &c.; in short, how the young mechanic may rise from the bench to something higher. Published by the New York Industrial Publishing Company. Price 15 cents.

THE AMERICAN GARDEN for December is beautifully printed on fine paper and illustrated with a great variety of engravings, while the information imparted under the head of Vegetable

Garden, Fruit Garden and Flower Garden, &c., is of great value to every one who has any taste for horticulture. It is published monthly by B. K. Bliss & Sons, 34 Barclay street, New York, at \$1 a year.

WILFORD'S MICROCOSM, a religio-scientific monthly, devoted to the discoveries, theories, and investigations of modern science in their bearing upon the religious thought of the age, published by Hall & Co., 23 Park Row, New York, at \$1 per year. The December number is full of very interesting papers, especially the one entitled "Sin not an unlooked-for intruder, but embraced in the Creator's eternal purpose."

STRAY LEAVES OF MUSIC.—Oliver Ditton & Co., Boston, Mass., have sent as specimens of their month's work in issuing Songs and pieces for everybody, an attractive collection, comprising:—Menetto. (Stray Leaves), (35 cents) pretty and quaint musical sketch by Brandeis. Beggar-Student March, (30 cents) arr. from Millöcker by Le Baron. Princess of the Canaries Gallop (30 cents) bright arrangement by Le Baron. No More, (40 cents) song by Nicola Ferri. Tarry with me, O my Saviour, (35 cents,) beautiful Solo, Duet and Octet, by M. Loughlin. When Old Age Comes, (40 cents) Italian and English words, by Tosti. The Letters we Carved on the Tree, (40 cents) a most attractive ballad by F. B. Haynes. Some Grief Your Looks Betray, (35 cents) by Lakmé. No Surrender, (30 cents), stirring song by Barri.

DOUBLE WHITE BRAMBLE.

(*Rubus fruticosus pomponius.*)

Of the multitude of varieties that exist of the common Blackberry there are three only that can be recommended as ornamental garden plants, and these, owing to their spreading and picturesque growth, are particularly suitable for planting as isolated specimens on lawns. They consist of the double pink (roseus fl.-pl.) a kind which produces a profusion of small rosette-like flowers of a beautiful pink colour; the Parsley-leaved, or laciniatus, a well-known variety, with elegantly-cut foliage; and the double white. This variety is particularly beautiful, its flowers reminding one more of miniature clusters of Aimée Vibert Rose than of those of a Bramble. Its blossoms, being semi-double and pure white, contrast charmingly with the foliage, which is of a paler hue than that of other Brambles. Like others of its race, it thrives anywhere, and often in places where no other ornamental plants would grow. Trained against a wall it is a fine object, and its vigorous growth rapidly covers a large space. It is useful, too, for screens, but its proper position is on a lawn where it has free scope in which to develop itself in all directions. In such a position it soon makes a huge symmetrically shaped bush, which from early summer till late in autumn is covered with bloom. It thrives in any soil, but where it has its choice seems to prefer a light warm one. It has been long cultivated in gardens, and appears to have originally come from Italy.—*The Garden.*

THE BEAUTIFUL DAY.

“We did not mean to do wrong,” she said,
With a mist in her eyes of tears unshed
Like the haze of the midsummer weather.
“We thought you would all be as happy as we?
But something, must always go wrong, you see,
We have our play-time together.

“Before the dew on the grass was dry,
We were out this morning, Reuben and I,
And truly, I think that never—
For all that you and Mamma may say—
Will there be again such a happy day
In all the days of forever.

“The sunshine was yellow as gold, and the skies
Were as sleepy and blue as the baby’s eyes;
And a soft little wind was blowing,
And rocking the daisy buds to and fro;
We played that the meadows were white with snow,
Where the crowding blossoms were growing.

“The birds and the bees flew about in the sun,
And there was not a thing that was sorry—not one,
That dear morning down in the meadow
But we could not bear to think—Reuben and I—
That our beautiful day would be done, by and by,
And our sunshiny world dark with shadow.

“So into the hall we quietly stepped.
It was cool and still, and a sunbeam crept
Through the door, and the birds were singing.
We stole as softly as we could go
To the clock at the foot of the stairs, you know,
With its big, bright pendulum swinging.

“We knew that the sun dropped down out of heaven,
And brought the night when the clock struck seven—
For so I had heard Mamma saying;
And we turn’d back the hands till they pointed to ten,
And our beautiful day began over again,
And then ran away to our playing.

“I’m afraid I can’t tell you the rest,” she said,
With a sorrowful droop of the fair little head,
And the misty brown eyes overflowing.
“We had only been out such a few minutes more,
When, just as it always had happened before,
We found that our dear day was going.

“The shadows grew long, and the blue skies were grey,
And the bees and butterflies all flew away,
And the dew on the grass was falling.
The sun did not shine in the sky any more,
And the birds did not sing, and away by the door
We heard Mamma’s voice to us calling.

“But the night will be done, I suppose, by and by;
And we have been thinking—Reuben and I—
That perhaps” and she smiled through her sorrow,—
“Perhaps it may be, after all, better so,
For if to-day lasted forever, you know,
There would never be any to-morrow!”
St. Nicholas.

Endicott owned up that he made, clean profit, \$4,200 this year from twelve acres of strawberries and grapes. This, he said, was after the picking and crates were all deducted, the net profit; and some of the berries, Sharpless, were so poor a crop as to yield only about a dozen crates of marketable fruit per acre. His berry for money, is the Crescent, with the Capt. Jack or Wilson. The grapes, Ives, pay an annual profit of from \$200 to \$300 per acre, with good culture.

A NEW WAY OF BLEACHING CELERY.—Some time since in strolling through Stratford, the market garden of Bridgeport and Birmingham, Conn., I was much interested in meeting W. H. Benjamin and learning his method of bleaching celery. Instead of earthing it up as is usually done, Mr. Benjamin simply ties it up closely in old news or other papers when it is ready for bleaching, and at the end of from 12 to twenty days finds it as nicely bleached as though it had been laboriously banked up. He says one-third more celery can be got from an acre, because when it is not banked it does not need to be planted so far apart; that a great amount of labour is saved and that by this process the celery never rusts.

COAL-ASHES FOR HEAVY SOILS.—For the purpose of making stiff soil friable, sifted coal-ashes, where they can be readily had are better than sand. They are more easily disseminated through the mass, and contain a small proportion of mineral salts likewise, though their merit is principally mechanical. I had a patch of clay over traprock that, after a rain, took on the consistence of putty. I could do nothing with it. Vegetable manure it scorned, and the spade cut in it as though it was skim milk cheese. The place was made the receptacle of the winter's ashes. Two years after, it was dug up through a mistaken order in the fall. Next spring I manured it, and had it dug over. Then I planted it, of all things in the world, with melons. They were a striking success. More than that, the friability of the soil remained permanent.—*American Garden.*

TRANSCRIBER NOTES

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

Punctuation has been maintained except where obvious printer errors occur.

Some illustrations were moved to facilitate page layout.

A Table of Contents was created with links to the articles for easier use.

[The end of *The Canadian Horticulturist*, Volume 7, Issue 2 edited by D. W. (Delos White) Beadle]