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JUNE

Low

The
CANADIAN + HORTICULTURIST.

PUBLISHED BY
THE FRUIT GROWERS' ASSOCIATION,
OF ONTARIO.

—
D. W. BEADLE, Editor.

ST. CATHARINES. - - ONTARIO.

No. 6.

1884

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DOES IT PAY TO SPRAY FRUIT TREES ?

From the Country Gentleman, February 1, 1883.

CANKER WORMS.—This insect goes through apple orchards, and stripping off all foliage, leaves the trees with the appearance of having been swept with fire. Repeated defoliation checks their vigor and eventually destroys them. But the insect spreads slowly, and abundant time is given to meet and destroy them. Two members recommended the residuum from kerosene oil for this purpose. But the best, most efficient, and cheapest remedy is showering or spraying with a mixture of Paris green, in five hundred times its bulk of water, and taking care not to turn any sheep or other animals into the orchard till at least one heavy rain has washed the poison from the grass if it has been seeded. One or two sprayings annually to orchards would, doubtless, be well paid for by the destruction of other insects, or all those which eat solid food and would thus swallow the poison.

THE ORCHARD AND NURSERY

From the American Agriculturist, June, 1885.

First, last, and all the time the orchardist must keep up his fight with insects. Success in fruit growing so largely depends upon the destruction of insects, that we feel it our duty to keep this subject prominently before our readers.

THE CODLING MOTH OR APPLE WORM.—Heretofore it has been supposed that destroying the fallen fruit, and trapping, by means of cloths around the trunks, the worms which left the apples remaining upon the tree, were the only helps. The moth, soon after the fruit sets, lays her eggs upon the calyx end of the young apple. The young grub as soon as hatched, eats its way into the centre of the little apple, and there, “growing with its growth,” works its mischief.

POISONING THE WORM.—Experiments by some Western orchardists show that Paris green may be successfully used to destroy the apple worm. Soon after the young fruit is set, the whole orchard is showered with water, in which a small quantity of Paris green is stirred, in the proportion of a table-

spoonful to a barrel of water. The liquid should be thrown in fine spray, in order to wet every young apple. In its early state, the young fruit is erect, its calyx upwards, and the least particle of poisoned water falling upon it is sufficient to destroy the young apple worm when it attempts to eat into the fruit.

IS IT NOT DANGEROUS ?—It will be asked. We do not regard the process as at all risky. Assuming that all the poison falling upon the young fruit could remain until that was ripe, there would be but little danger; but as the rains of months will fall upon the fruit, there is no danger to be feared. Fruit growers look upon this method of treating the apple worm as a discovery of great value.



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Lockport, December 10, 1882.

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Mr. A. W. WHEELLOCK, of Moscow, N. Y., says: “I raised 600 barrels of apples the past season—300 of them were Northern Spys, raised on two and one-half acres. I sprayed my trees with Paris green. An orchard treated to Paris green ten days later failed; it was too late to save them. I applied the poison with Field's Force Pump, bought at Lockport.”

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ROSE.--QUEEN OF THE PRAIRIES.

PAINTED FOR THE CANADIAN HORTICULTURIST.

CLIMBING ROSES.

You have seen a quiet home in the country, or suburban residence, it may be, with rose-covered verandah, and you thought you never had seen anything more pleasing. The blending colors of various shades, set off with the fresh, green foliage, gave that home a charming aspect, and you resolved to plant some climbing roses about your own dwelling. That you may plant and enjoy the fruit of your labor, that you may be spared the disappointment of having planted only to see your own rose-trees perish, is the object of this short paper.

There are many varieties of climbing roses, and some of them of great beauty. Were our climate not so severe in winter we might greatly extend our list of roses with which to cover a verandah, or trellis, or hide a wall. One of the most beautiful sights of Jacksonville, Florida, is the trellis of Marechal Niel in the grounds of Dr. Kenworthy. But we must content ourselves with roses of a hardier race, and one of the important lessons for us to learn is that of the hardiness of the several kinds.

The Ayrshire Roses are almost hardy enough to endure the climate of the

south shore of Lake Ontario and the north shore of Lake Erie. Through some of our winters in those parts of the country they pass unharmed, but they are liable at any time to serious injury. *The Dundee Rambler* belongs to this class. It yields a great profusion of semi-double white flowers, and is a favorite with the writer. *Queen of the Belgians* is creamy white, and *Ayrshire Queen* is a crimson purple; but none of the family can be relied upon to endure our winters.

The Boursault Roses are hardy enough, but they are not sufficiently beautiful to satisfy most rose growers. Yet they are profuse bloomers, and being natives of the Alps they should endure the rigor of a Canadian winter. It has been the fashion with writers on the rose to speak slightly of this family, and one enthusiastic cultivator calls it worthless. Your editor begs to dissent from this judgment, and to say that it is well worthy of being grown in all the colder parts of our country until some variety as hardy and more beautiful can be found to take its place. In an experience of nearly fifty years we do not now remember to have seen it

injured by the winter, nor fail to be covered in its season with a profusion of bloom. There are two varieties that have been usually grown: the Crim-son, yielding large semi-double, pur-plish crimson flowers; and the Blush, of a deep flesh color.

The Banksia Roses yield very beau-tiful, small, double white, or yellow or rose-colored flowers, which are produced in such profusion that each branch is a garland of roses. It is recorded that there was at Toulon, France, in 1842, a Banksia rose-tree which covered a space of eighteen feet by seventy-five, and had upon it from fifty to sixty thousand roses open at one time. But alas, the Banksia Roses are too tender for this climate, and the Canadian rose grower must pass them by, and seek more hardy sorts.

The Many-flowered, or Multiflora Roses are also tender in this climate, too tender to be successfully grown. Of this family is the variety known as Seven Sisters. If one desires to make the attempt at growing tender climbing roses, he will find the tea-scented Noisettes, such as Marechal Niel, Sol-faterre, Lamarque, etc., about as hardy and much more beautiful.

The Prairie Roses are the most hardy of our popular climbing roses. To this family belong Queen of Prairies, Bal-timore Belle, Anna Maria, Triumphant, and Gem of Prairies. Of these the Baltimore Belle is somewhat tender, and in our more severe latitudes will likely be injured by the winter. Yet it is to this family that we must look for our most desirable climbing roses.

Of those at present in cultivation we esteem most highly the Queen of Prairies, a colored plate of which adorns this number. It has sufficient hardiness to endure our climate, the flowers are handsomely cup shaped, of a pleasing color, and produced in great abundance. Anna Maria is of a pale pink color, with few thorns. Triumphant is rosy-red. Gem of the Prairies is also rosy-red and slightly fragrant; the only one of the Prairie family that can lay any claim to fragrance.

In growing climbing roses it is im-portant that the border in which they are planted should be well supplied with fertilizers. On the approach of winter the surface of the ground over their roots should be well mulched with partially decayed leaves or barnyard manure. Use the knife sparingly, cutting out only what may be neces-sary to remove in order to prevent over-crowding.

MIDSUMMER MEETING OF THE FRUIT GROWERS' ASSOCIATION.

At the invitation of the Town Council of Berlin the Association will hold its next meeting in the Town Hall on Wednesday and Thursday, the 25th and 26th of June, 1884, commencing at ten o'clock a.m., June 25th. The following are the only subjects that have been suggested for discussion: The Sparrow, its habits, its food, and the food upon which it raises its young. Is it a useful bird or a pest? The black knot on the plum and cherry trees, and its cause. Why do healthy and thrifty trees that blossom abundantly fail to set their fruit? The best varieties of fruits for Berlin and vicinity. The best time to prune fruit trees.

The Directors will meet at Berlin on Tuesday evening, June 24th.

FLORIDA IN WINTER.

(Continued from page 102.)

A further sail of some seventy-five miles up the St. John's River brings us to Palatka. Here we spend the day in looking about and visiting the orange grove of Mr. H. L. Hart, on the opposite side of the river. Through the politeness of one of the principal merchants, we were permitted to visit his country seat just out of the town. Here we found the first pear trees we had seen in Florida. They did not seem at home in this sand-bank, and were barely able to live. The Drummond Phlox had evidently escaped from cultivation and was in blossom almost everywhere. But such plants as they were, one short, straight wiry stalk, with a little umbel of flowers on the top, so starved looking, one could not help pitying the poor things. But the young orange trees looked vigorous and healthy, so that one must conclude that pure white sand suits their constitution. The vegetable garden was located very near to the bank of the river, where the ground was damp and the soil full of leaf mould. The vegetables did not seem to know what to do with themselves, but were apparently debating the question whether to grow or not to grow. The rose garden was filled with many choice varieties, chiefly the ever-blooming sorts, and had the same lack of fine foliage and vigorous healthy look which we had noticed at Jacksonville and St. Augustine; nevertheless they were well filled with bloom.

A little, puffing steam tug took us across the river to Mr. Hart's orange grove. It contains about three thousand trees, not all of them yet in bearing. We found Mr. Sperry, the manager, and introducing ourselves, received from him a very cordial welcome. He accompanied us through the grounds and patiently answered our numerous questions. Here we found three varie-

ties of oranges were being cultivated, but chiefly the variety known in our northern markets as the Florida orange. The other kinds are known as the Mandarin and Tangerine. These sell at high prices in New York city during the holidays, being in demand for their social entertainments, because when peeled the quarters fall readily apart and ladies can eat them without soiling their gloves. The Mandarin is a small growing tree, having much finer foliage than the common variety, but the Tangerine seems to grow as large as the common kind. The trees are nearly all out of flower and the young fruit set for the new crop, and yet most of the trees are laden still with ripe fruit. The oranges ripen in November and are gathered as wanted from that time until April. If any remain as late as April they are then gathered and sent to market. It is very convenient to be able to store the fruit on the trees through the winter and gather it as required either for personal use or for sale. One orange tree was shewn us by Mr. Sperry of larger size than any of the other trees whose crop in one year he stated to have been six thousand oranges.

Here we made the acquaintance of a fruit of the citrus family known as grape fruit. The name seemed very inappropriate, for we could see no manner of resemblance to a grape, neither in the fruit nor the tree that bore the fruit. To our inquiry why the name was given to a fruit usually larger than an orange and nearly of the color of a lemon, Mr. Sperry replied that he supposed that it was because the fruit was borne in such clusters, reminding one by their number and proximity of grapes on a bunch. Well, perhaps this is the reason; it will do in absence of a better, but he was certainly a most imaginative genius that perceived the similarity. This grape fruit is very juicy, with a

slight taste of bitter mingled with a mild acid. We were told that it is sometimes used as a mild tonic when slight symptoms of malaria appear, certainly it is more agreeable to the palate than quinine. A few lemon trees are also grown in this grove, but our impression is that the lemon thrives better in more tropical portions of the State.



BANANA.

Bananas were growing on one side of this orchard skirting the river bank. On some of them we found bunches of fruit, and on one a flower bud. The process of inflorescence of this plant is quite novel. The large purple flower bud hanging from its recurved stem is in truth, so far as it meets the eye, a large purple spathe infolding a ring of fertile flowers arranged around a central stem. This purple spathe gradually unfolds disclosing a circlet of young bananas, and beneath them another purple spathe which in its turn unfolds, disclosing another circlet of fruit, beneath which is yet another spathe with its infolded contents. This process is

continued until the bunch of fruit is completed with its several clusters or circles of fruit. The banana is very sensitive to frost, hence the crop is very uncertain in this part of Florida, for frosts do sometimes visit this region with sufficient severity to injure the orange trees. Of this we had evidence in the mutilated condition of some of the older trees in this grove. It will be difficult to find a place where the labors of the fruit grower are not sometimes frustrated by untoward causes. Much has been said by interested parties in Florida about the frost line, below which there is no frost, but the writer is fully persuaded that no such line exists. There has been and there will be again winters of unusual severity, when the frost will be sufficiently severe to seriously injure vegetation. We are credibly informed that in February 1835, the St. John's River was frozen for several rods from the shore and the thermometer indicated seven degrees above zero, Fahrenheit, at St. Augustine. And again in January 1857, the mercury fell to sixteen above zero at Jacksonville.

But the weather was delightful at the time of our visit to this grove, and after our feet were weary with wandering through it, we sat down to enjoy the soft breezes, and look at the overshadowing arches of green so richly studded with gold. Surely Solomon must have been thinking of oranges when he spoke of apples of gold. The scene presented to our view, and the whole of the surroundings were not only new but novel, and novelty adds much to the zest of enjoyment. We had all of us seen more gorgeous sunsets than the one now brightening the western sky, and listened to the vesper hymn of birds as melodious as that which now was warbled on the evening air; we had gazed on scenery more grand and quite as beautiful as that now

spread out before us, and been fanned by breezes as soft as those that now kissed our brows; but I doubt if any one of us ever enjoyed a sunset hour more keenly than the one we spent in that orange grove.

"SPRING WORK IN 'THE GARDEN.'"

(For Canadian Horticulturist.)

MR. EDITOR.—I send you a fine description of spring work in the garden, and the results, as clipped from one of our village locals. I am sure you will be very much amused at it, for although it may be true of that particular village, it is not true of any other that is within the range of my observations:

"At this season of the year the industrious owner of a town lot, riseth up before the sun in the morning, girds up his loins, seizes a spade, and delves the fertile blue mud until the welcome breakfast bell recalls him from his labors. As the net result of his season's work he will have: one case: rheumatism, one ditto lumbago, one pair d-moralized pantaloons, two pairs second hand shoes (tramp's choice), half-a-dozen sickly onions, two bunches lettuce, five stalks of rhubarb, and half-bushel potatoes."—*Watford Advocate*, May 2nd, 1884.

On the other hand, we frequently have occasion to admire the beautiful locations of many of the pleasant and thriving towns and villages of our proud Ontario. They seem to be founded on the very richest and most beautiful spots of earth that ordinarily fall to the lot of man to possess. Every township in every county holds as a precious inheritance high, and well-drained, rich alluvial soils that are the wealth of nations, and these are sure to be the proud site of some large or small, more or less thriving town or village, with its wealth of happy and prosperous citizens. This is just as it should be, and they are the pride of the country at large. Talk about hard feelings, bickerings and war between the

town and country! It is all purest nonsense; they all need one another, and are proud of each other's possession. Those town and village sites are the loveliest spots of earth that enrich and beautify a country, and are as stars in the ever blue firmament of its glorious history. Each of its inhabitants is an ant in the mole hill, and all are working for the general good of the entire community. The poorest man amongst them may be as happy and self-important as a prince in the possession of a town lot or of several, and on this he toils with never-tiring energies early and late, delving, not in the "fertile blue mud," but in the more fertile grey or black mould of our rich alluvial soils. And why should he not thus work with unflagging diligence! It may be that his lot is the admiration and pride of the entire corporation. In this very village to which our extract applies, we know in particular of one of those happy and fortunate possessors of a beautiful town lot that is looked to and is the admiration of the entire village. The owner is a florist of no mean pretensions, and to walk up and down that street and only gaze from the outside upon those lovely beds of rich and varied colour is a joy and lasting pleasure every villager prizes, and is in the conversations of every gossip. Now, sir, you yourself, with your finely cultivated attainments, I may be safe to say, would be delighted to pass some fine summer evening by that man's garden, and you would in all likelihood be amongst those who stop to gaze at the variety of colour and beauty, and to sniff the fragrant perfumes that float from that spot of cultivated earth and fill the surrounding air. Is not this as it should be? In every village we find them; these precious workers for the general good; the very "salt of the earth," with their rich endowment of fine taste and well trained muscle.

What would our country do without them, for they are the very kings and princes of society, and are worthy of our deepest respect and reverence. They are the teachers of the race and the guides of the whole mass to better things, and they point us to a period in our country that is intensely glorious and beautiful in the not far distant future. All honor to them, and let their names be held in everlasting remembrance, and their works shall follow them.

ANOTHER POINT.

How many a man by rising early these beautiful May mornings and drinking in freely the life-giving and energy-producing air of the morning has secured health and happiness and freedom from the strong temptations of the mere loungee at the corner. We firmly believe that those garden plots, and the interest and kindly care that is bestowed upon them are the "*Saviours of Mankind*" in a very important, or rather in many important senses. In this way is the love of home enkindled and fanned into a devouring flame. Everything he does upon his lot makes his home more beautiful and more attractive to him and to the dear faithful partner of his joys, and the children that may be given them. As the home grows in beauty, the hearts of all are more attracted to it, and firmly to one another. Is this worth nothing? Again by these efforts the man's lot and his circumstances are gradually and surely bettered. The grateful and fruitful earth will surely respond to his generous efforts and not a moment's toil will be left unrepaid. The savoury vegetables, the luscious fruit and the sparkling and beautiful flowers will come to his hand to rejoice him as surely as the silver dollar will come into his hand for his day's labor.

Again, when he goes from his shop in the evening tired and weary with the

confinement and stagnant air of indoors, and many muscles aching that have not been employed during the day, for the profitable employment of his evening hours, that will surely bring sweet and refreshing rest during the night, who can rightly estimate the true value of the home garden? From the shop to the street corner, to the carousing house, to the gambling table, to the tavern to spend the precious hours of evening before rest, how inconsistent, how injurious? The thing is a farce, a vile temptation and no man can prosper by it. But in the garden, after the frugal evening meal, the air fragrant with spring and summer breezes, the strength is renewed, the spirits are enlivened and cheered, the wife and family delighted, and the whole prospect of the man brightened and bettered. A man thus trained from his marriage day, or from his early youth, is a better man than the mere dandy loungee, though his clothes should be of finest broad-cloth, his fingers loaded with gold and silver, and jewels dangling at his side. If he is a mere loungee and nothing else, though he be the son of a duke or a prince, he is an object of contempt, and not of envy. But the honest, frugal and progressive man, who is not above the labor that cheers and blesses, is the man to be esteemed and regarded as the wealth of his country and the prince of his people. Let us then be careful how we lightly esteem those simple labors that are accompanied with so much of blessings. And further, let us not begrudge those simple efforts in tilling the grateful soil, that will so surely bring such rich and abundant rewards to the labor and expense bestowed upon it. In this way we shall most surely and effectually benefit our selves, and ennoble and beautify the country of which we form a humble part.

Arkona, May 5th, 1884. B. GOTT.

PROPOSED REMEDIES FOR SCAB ON APPLES.

BY WM. SAUNDERS, LONDON.

At the winter meeting of our Association held in Woodstock, among many other interesting topics discussed was that of the fungus, which is popularly known as "spot" or "scab" on apples. A committee of gentlemen present volunteered to conduct a series of experiments during the coming season to test the value of sulphur and sulphur compounds as preventatives, and with the view of aiding in this work I agreed to furnish a short paper for the *Canadian Horticulturist*, giving suggestions as to the substances most likely to be successful, and the proportions in which they should be used. At the same time it was agreed that experiments should be made to further test the value of Paris green as a remedy for the codlin moth.

Sulphur.—By this term is meant that form of sulphur in fine powder, known as flowers of sulphur or sublimed sulphur, an article everywhere procurable and cheap. The usual retail price of it is ten cents per lb. The proportion which should be used is one pound in from ten to fifteen gallons of water, and applied with a syringe or force pump. The finely divided sulphur must be kept in suspension by stirring the liquid frequently with a stick. When this mixture is showered on the tree a fine deposit of sulphur collects on every part of it, and by the action of the sun and air the sulphur is gradually converted into sulphurous acid gas, one of the most efficient agents known for the destruction of mildew and fungi.

Hypo-Sulphite of Soda.—This is a white salt, readily soluble in water. It is made by boiling sulphur with a solution of caustic soda, at the same time passing into the mixture a stream of sulphurous acid gas. It is much used by photographers, and is generally kept

by druggists, and in cities is usually sold at about ten cents per pound. It may be used in the proportion of one pound, dissolved in ten gallons of water, the mode of application being the same as for the mixture of sulphur and water. As the solution in this instance is perfect no stirring is needed, and when this salt is thus dissolved in water and freely exposed to the air, as it is when sprinkled on the foliage of trees, it decomposes and deposits sulphur which acts as already described.

Sulphide of Lime.—This substance may be prepared in the liquid form by boiling together two pounds of sulphur and one pound of quick lime in two gallons of water with frequent stirring until the liquid assumes a reddish yellow color, when it may be allowed to settle, and the clear liquid poured off. This should be applied to the trees in the proportion of one pint of the solution to fifteen or twenty gallons of water, and being a clear solution after it is once well mixed it will need no further stirring. The sulphide of lime solution should be made out of doors on account of the offensive odor which is given off during the process. Any old tin or iron vessel which is sound will do to make it in; the vessel containing the mixture may be placed on a few bricks built up so as to admit of a small fire underneath, and while boiling it should be frequently stirred with a stick.

All of these substances are likely to be of use, they are very cheap, and it is desirable that they be used on a large scale and the results reported. The liquids should be applied soon after the fruit is well formed, and the application repeated several times during the season, varying the number of applications in different instances, so as to determine if possible how many are needed.

With regard to the use of Paris

green for the codlin moth, a quarter of a pound of the pure article should be well mixed with about forty gallons of water, and kept constantly stirred while being applied with a syringe or suitable pump. The proper time to make the application is soon after the fruit is formed and while it is still in an upright position, when small drops of the solution find their way into the calyx or eye of the apple, and drying deposits there a minute quantity of the poison sufficient to destroy the young larva of the codlin moth as soon as it is hatched. As an additional precaution a second application may be made a few days after the first. Where orchards are in grass the use of this poison is attended with danger as a large proportion of the mixture will necessarily fall to the ground and lodge on the blades of grass and in the little hollows about their base, and to some extent remaining there may seriously injure any cattle fed with it. When Paris green is used, it should be associated with clean culture, or otherwise animals should be kept out of the orchard, and the grass, if cut, be allowed to decay on the ground.

SPARROWS AND OTHER BIRDS.

DEAR SIR,—Having read in our "Journal," "*The Canadian Horticulturist*," several interesting letters and articles on the above subject, I take the liberty of sending you some extracts from articles in the *Leisure Hour*, etc., which, though much curtailed, form a rather long letter, yet I am sure they will be of interest to our fellow members and agriculturists in general.

A club for the destruction of sparrows and other birds was in formation in one of the counties of England. At the inaugural meeting the following facts were elicited:—

One farmer having destroyed upwards of 10,000 small birds in the season, yet

his crops were not even up to the average of the neighbouring farmers, being eaten up with wire worm and grubs.

Another farmer having killed five birds that morning opened their crops, and found that a crow or rook which was busy with his beak at the roots of barley, which was just springing from the ground, when shot, contained nothing in his crop but cockchafer grubs, worms, and some maggots of the cornfly. The truth is that the rook does not, as a rule, attack the healthy blades of corn, but sees with the wonderful quick sight with which his Maker has endowed him those which are fading and perishing, and knows by instinct that there is a worm at the roots of such blades. It is the worm he digs for, not the corn, though he will eat that when there is nothing else to get—in the winter, for instance, or dry weather, when the ground is too hard to dig below it. But their natural food is grubs and insects; the wire worm and larvæ of the click-beetle they are particularly fond of. They can be seen following close to the heels of the ploughman. Of course, they cannot then be picking up grain as none has been sown, but are devouring the grubs and insects which are waiting to devour the crops. We therefore need not grudge them a little of the ripened corn when they are driven to it afterwards by hunger, for they have more than earned their share of it.

Some years ago an entire district was nearly deprived of its corn harvest in consequence of the rooks having been killed by order of some of the local authorities, the grubs increased to such an extent that they ate up all the crops.

The same thing happened in France before the Revolution of 1789. The Government found it necessary to offer rewards for the best method of destroying the grubs, and yet the farmers ignorantly went on shooting rooks and

other insectivorous birds, as if they had been their greatest enemies. In one instance a mob of people were so enraged against one of the land owners who had a rookery in his grounds, that they went to his house in a body, dragged him forth and langed him on a branch of a tree, after which they shot his rooks in triumph. The proper way to have delivered their fields from the grubs which ravaged them, would have been to encourage rather than have killed the rooks, and have thanked the owner.

If every rook's nest in this land were pulled to pieces to-morrow, there is no doubt that you would all wish them in their places again, and well filled too, before this time next year.

Next bird, a swallow. He had no trace of fruit or any kind of vegetable substance in his crop, nothing but flies and gnats in very great numbers, which, if they had been suffered to live, would have given birth to thousands of others. Indeed, if there were no swallows or other small birds to kill gnats for us, we should soon be as badly off as the Egyptians were when God sent "all manner of flies" upon them for their sins. Among the flies found in the swallow's crop are some of the tipulæ kind—"daddy long legs" some call them. These creatures deposit their eggs in great numbers under the soil, and are there hatched and produce larvæ in the form of elongated worms, having horns, with which they cut and bruise their food, which is the fibres of the roots of cereals, such as wheat and barley. They also do considerable mischief by disturbing the soil and exposing the sprouting seed to the sun. Therefore, we should be thankful to the swallows for destroying the flies before they give birth to these pests.

Next bird, a blackbird. His crop was full, and there are some traces of fruit and berries in it, but it contains

chiefly caterpillars. It is the same with nearly all the small birds, they will not refuse fruits, but they also feed largely upon insects; if they do some injury by their own depredations, they do a great deal more good by destroying other enemies. The celebrated writer and naturalist, Mr. Bree, writes:—

"In the month of August, I was struck with the rather unusually large assemblage of blackbirds which frequented my garden. Eight or ten were usually to be seen together, and one morning I counted at the same time thirteen, hopping about and chattering on the grass-plot before the house. They usually paid their visits at eight in the morning; they continued to arrest my attention for ten days or a fortnight. The birds directed their operations more especially to particular spots on the grass-plot, which they stocked up with their bills, till the turf, which had changed colour, and was supposed to be dying, became almost bare in patches, and was quite disfigured by the refuse roots of grass, etc., which they left littered on the surface. Indeed, such was the rough and unsightly appearance which the grass-plot presented in consequence, that hints were thrown out that the blackbirds ought to be destroyed, for they had repeatedly been seen in the very act of disfiguring the turf, and the whole mischief was, of course, from first to last, attributed to them.

"Suspecting what might be the object of the birds' research, I turned up a piece of the earth with a spade, and found it swarming with cockchafer grubs of various sizes, and this circumstance confirmed my suspicion that it was for the purpose of feeding upon these larvæ that the blackbirds had made such havoc of the grass-plot. They performed, shortly in this case, precisely the same service, by destroy-

ing the cockchafer grubs, that the rooks are so well known to do in the wheat fields. The turf, I should add, soon regained its verdure, and the injured patches were scarcely distinguishable from the rest of the plot."

Mr. Bree adds: "That there was plenty of fruit in the garden, gooseberries, currants, etc., which might have been had without trouble; but the blackbirds preferred digging through the turf, that they might devour the cockchafer grubs which were under it."

Sparrows next. Sparrows burrow in the stacks and eat a great deal of corn, it must be confessed; and many other small birds take great liberties with our sprouting crops, and eat the buds and seeds of plants and trees. But on the other hand, writes Stanley in his "Familiar History of Birds," sparrows feed their young thirty-six times in an hour, which, calculating at the rate of fourteen hours a day, in long days of summer, gives 3,500 times per week. A number corroborated on the authority of another writer, who calculated the number of caterpillars destroyed by one pair of sparrows in a week to be about 3,400. Redstarts were observed to feed their young with little green grubs from gooseberry trees twenty-three times in the hour, which, at the same calculation, amounts to 2,245 times in a week; but more grubs than one were usually imported each time. Chaffinches at the rate of thirty-five times an hour for five or six times together, when they would pause for the space of eight or ten minutes; the food was green caterpillars. The titmouse feeds the young sixteen times in the hour.

A single pair of sparrows, during the time they are feeding their young, will destroy about 4,000 caterpillars per week. They likewise feed them on butterflies and other winged insects, every one of which, if not destroyed in

this manner, would be productive of several hundreds of caterpillars. Examining the sparrow's crop, you will find the larger portion of the contents is insects, etc., above-named.

And lastly, the fly-catcher. These birds may be seen watching for their prey upon the branch of a tree, darting forth with wonderful swiftness whenever a fly passes near, catching it with a snap of bill, and then returning to its post. A single pair of fly-catchers has been seen to feed their young no fewer than 537 times in one day with flies, which, if they had not been destroyed, would each have given birth to hundreds of maggots. Thus, on a moderate calculation, one pair of birds will destroy, in a single day, as many flies as would produce 100,000 caterpillars.

However, after these practical demonstrations and facts, seven of the farmers were determined that they would still proceed to destroy all small birds and nests on their farms. They set to work both with guns and poison, and also offered rewards for all nests that the villagers could bring in. By these means they killed immense numbers, but the poison acted two ways, as one man lost his three cats through their eating the poisoned birds, and also lost a brood of very fine, pure breed chickens, which broke fence and got the poisoned grain also. Their hedges were also very much broken about by the boys while nesting. At the end of the season they had to bewail a considerable loss of valuable time, besides being eaten up with wire worm, grubs, caterpillars, etc., as their fields yielded considerably less per acre than on those farms where the birds were allowed to go unmolested. Also, they had very little small fruit, because the bushes were destroyed by the same pest. They, therefore, came to the wise conclusion that they had rather overdone the thing, and that in

future they would destroy no more birds in like manner.

I think this shows what good and useful allies we have in these small birds, and we may think ourselves fortunate that they do us such good service, and require so little payment. With ordinary care on the part of the farmer and horticulturists, the birds may be kept from doing any serious damage to the crops, and if they help themselves rather freely sometimes to the grain and fruit, they have a kind of right to do so, having given us such important help in the preservation of it. "The labourer is worthy of his hire." And, "Behold the fowls of the air; for they sow not, neither do they reap, nor gather into barns, yet your heavenly Father feedeth them." And I therefore think, for my part, that God intended the birds to have a reasonable share of the fruits of the earth as well as ourselves.

Yours, etc.,

FRED. S. COLES.

Hamilton, Ont.

THE ENGLISH SPARROW.

MR EDITOR,—I have taken your monthly journal ever since its first issue, and believe it to be improving with the times. I think it the most valuable of its size published, not that I believe all its teachings, nor do I believe all that is said by sapient members of the F. G. A., especially when they say the English sparrow must go. Poor little emigrant, he is made the scapegoat for nearly all the evils that befall the Dominion. I confess I am greatly astonished at such a resolution from those gentlemen. I could not muster courage to say a word on behalf of the poor sparrow, until the article of Mr. George Mitchell appeared in the April number. He speaks to the point, and true every word, with the slight exception that the sparrow will eat oats in Scotland and Ireland; I saw that

myself. I should as soon charge the sparrows with causing an earthquake or a blizzard, as a great many things that are laid to their charge. For instance, I saw in a paper a few days ago that they eat bees and feed them to their young, and with dexterity extract the sting, so as not to hurt the young. Now I would like to borrow that man's glasses, for I think a blind man might see with them. They are also charged with driving away all the small birds. This is certainly a very unfair charge, with which they have nothing to do. If these gentlemen would only turn their energies against the small boy, and big boy, too, with their shot guns and shooting matches, leaving nothing with feathers large enough to take sight on; and, added to this, the hordes of half-starved cats, the wonder is there is a bird left alive, great or small.

I also saw them charged with sucking eggs of the robin. I simply place that with the others as lacking proof or reason, not to speak of the fruit bud charges. Now, Mr. Editor, I have bees in my yard, and have had for the last ten or twelve years, with plenty of sparrows, and I never saw a bird of any kind eat bees, excepting the bee martin (or king bird, as it is sometimes called), eat a few, but not enough to be worth notice. Domestic fowl, even, will not eat bees. I once saw a rooster catch one by mistake, and after dancing around for some time, I concluded he would avoid such mistakes in future. I have fruit of different kinds grown for market, and am satisfied none of them are in any way injured by the sparrow. I did see him though, as I was plowing the orchard, follow me at a little distance, and pick up chrysalis of different kinds of moths and beetles, and I should be very sorry to lose their company. It is urged, as an objection, that his song is not very sweet. Quite true. But better that than no song at

all, for he stays to cheer us all the dreary winter. Surely we should not grudge him a little grain from horse droppings, with the addition of a few crumbs from the table cloth. So I sincerely hope those gentlemen will reconsider their decision, and spare the poor little emigrant for the good he does, and lay nothing to his charge but what they actually know he is guilty of.

So, hoping you will excuse me for occupying so much of your valuable space,

I remain, yours,

S. HUNTER,
Scotland.

Hawthorn Place,
April 18th, 1884.

TO PROTECT TREES FROM MICE.

As you plead for short articles from your readers bearing on horticulture, allow me to give you my experience of a very simple and effectual way of saving young apple trees from the attacks of mice in winter. I take strips of cedar bark about eighteen inches long, and aljust them round the tree, putting one end on the ground and tying the upper ends with a piece of twine so that the strips lie close to the tree. I just put the strips in my wheelbarrow and go round before the snow falls and attach the *armour* to each tree; and then in spring I go round again, cut the string and gather up the cedar strips, as they will last for years. At first I used bits of shingles, but the bark is better. I rub down my trees with soft soap every spring, applied with the foot of an old worsted sock, and as far up the tree as I can reach. I daresay a paint brush would do, but the other is more effective. I like *The Horticulturist* very much, and hope all good gardeners will help it to the best of their ability.

Yours truly,

AN OLD BACKWOODSMAN.

Fergus, 12th April, 1884.

ANNUAL REPORT.

PINE GROSBARK.

Thanks to Mr. T. McLlwraith for his instructive letter on the above class of birds. It is quite evident it was wrongly named, though I sent specimens to Toronto for that purpose. At the same time there is no mistake about the havoc they committed on my peach and cherry trees which was witnessed by many others besides myself. We had fully as many specimens of the male as the female birds, and for their beauty and their gentle, confiding habits I would like their society; but I am satisfied any fruit grower whose trees suffered from their ravages as mine did the winter of 1882-3, would have as little compunction destroying them as they would do a robin.

The Annual Report is to hand, a ponderous book of valuable suggestions, which will be worth many times the annual subscription.

J. BISSELL,

Thedford, April 26th, 1884.

NORTH SIMCOE.

MR. EDITOR.—Your *Horticulturist* is a valuable work, and it only wants to be known among the farming community to be properly appreciated. I should feel it a great loss to be deprived of the information it imparts, after enjoying its pages so many years; and the Report, which is full of good news and instruction for the fruit grower. The information cannot be surpassed. I fully enjoy the articles contained in the *Horticulturist*, especially when it comes from the North. The two articles written from North Simcoe were satisfactory, with the exception of that part that referred to the apples, which were denounced by each writer. While our correspondent speaks of the value of one kind of apple too highly, he runs to the extreme in denouncing the others. He speaks of his limited experience of

this part of the country, and says it may be of little value. We do not think so. A limited experience is better than no experience at all. He goes on to say that he has made four mistakes, and that was planting the Northern Spy, Baldwin, R. I. Greening and Rox Russet. And all this mistake, because he thinks the Northern Spy too long in coming into bearing. The Baldwin and the others may not do on some soils, but they will do on others, therefore, we should not condemn them, and say they will not do in this part of the country. Again (No. 2), from North Simcoe, seems to understand something about the good and bad qualities of fruit, and which will succeed in this part, and so on. But we have such varieties of soil and location, that what will do on one farm will not do on another. And yet, when we come to examine in the aggregate, we find that nearly all the winter and autumn fruits do well; and also many of our summer kinds do excellent, yielding good, clean fruit, and unequalled in quality and size.

I wish, Sir, to put things right, if possible. I believe these kinds of discussions are for good. To be brief and make a long story short, I have been trying to raise apples these fifty-two years in this part of the country. I have made many mistakes, and yet have succeeded to a limited extent. In speaking of apples, I have over twenty trees—trees have been out twenty-four years—of Northern Spy in my orchard, and they are as healthy as any trees I have, and produce as good crops, and as fine fruit as any other kinds, and much more saleable in the spring. They are long in bearing, but they get to be large trees before they bear, and then they require strong soil. Plenty of ashes and manure, and then you will have quality and quantity that will give you satisfaction for years. The

Northern Spy will grow in the North of Simcoe. The Baldwin I have top grafted, and it has done well. The R. I. Greening does not do quite so well, although I have had some good crops. I cannot condemn it. The Russets of all kinds have done fairly well. Our soil is clay, sandy loam, and strong loam and gravel, all within five acres. But, Sir, the great secret of success is to attend to your trees, get good stock, plant it right, and attend to it. Keep it clean, and feed the trees well, if you want fruit, and then you will have pleasure in the labor of your hands. But, above all, let all the farmers that have only a few trees, become readers of the *Horticulturist*, and members of the Fruit Growers' Association, and they will never repent it.

C. H.

STRAWBERRIES.

Mr. EDITOR,—I sent you a statement last year of my success with the Wilson Strawberry the year before, and the plan of treatment.

The same course was followed last season with still greater success. Four hundred baskets were taken from less than five rods of ground. I am pursuing the same course with them this year and hope for success, but do not expect to outdo last year.

J. B. AYLWORTH.

Collingwood.

THE AMERICAN ASSOCIATION of Nurserymen, Florists and Seedsmen hold their next annual meeting in the City of Chicago, on the 18th of June, continuing three days. Their headquarters will be at the Sherman House. The objects of this Association are the cultivation of personal acquaintance, exchange of products, perfection of methods of culture, packing, etc.

QUESTION DRAWER.

TO THE EDITOR OF THE CANADIAN HORTICULTURIST.

Would you, or some of your correspondents who can speak from experience, kindly inform me how best to apply copperas to apple trees or strawberry beds. I would suggest to any of your readers who would like to grow English gooseberries to plant in clay soil, and scatter a shovelful of wood ashes under each bush. Scatter a gallon of salt under each good sized plum tree in the spring. If you want good apples, sow two gallons wood ashes, one gallon of lime, one gallon of charcoal, one quart of salt, one quart of superphosphate, under each good sized tree, every second year; also a wheelbarrow load of good barn yard manure. Supply all the ingredients the tree requires, and there will not be much disease.

I read with pleasure the reports of your Association, but I think your system might be improved. Suppose, for instance, you are discussing the question, "Is the Golden Russet a Profitable Apple to Grow?" Let those who think it is sit on the right hand of the President. Those who think it is not on the left. Those who have never tried the fruit sit at the end. The President has his list of questions prepared. I shall suggest a few. How old are your Golden Russet? What is the average yield per tree per year? What kind of soil do they grow on? Are they protected from the wind? How? Are they planted in sod or cultivated? What kind of manure do you use? How much do you apply, and how often? How do you prune your trees, and at what season? In what County do you live? Having questioned in this manner all who succeed with the Golden Russet, pick out five or six of the most successful, and compare their answers, and then draw up your report. The best Golden Russets are grown in such a County, on such and such soil.

Manured as follows. Protected by a belt of evergreens or not; well cultivated or in sod. The President would then proceed to question those who did not consider the Golden Russet a profitable fruit to grow. Perhaps it would be found that the soil was not suitable. The land never manured. The grass allowed to grow too close to the trees. The grain sowed under the trees. The President might again sum up the cause of the failures as gathered from the evidence before him. When I see all the farmers in the country planting out orchards, I begin to fear the business will be overdone; but I know that next spring, in their greed, they will plant grain right up to the trees, and that will kill half of them, and the next dry summer they will turn in the cows to finish them off. Take courage.

Yours, R. LEWIS.

THE RED SPIDER.

TO THE EDITOR OF THE CANADIAN HORTICULTURIST.

DEAR SIR,—In reference to an article (a very correct one, and very valuable to all who cultivate plants) in the April number of the *Horticulturist* on the "Red Spider," I may state that in my experience the simplest and most effective way of ridding potted plants of these pests, is in rainy weather to take the plants from the house or conservatory, and lay the pots on the sides on the lawn, or on any plot of grass, where the plants will not be splashed with the soil. If the rain falls freely upon the under side of the leaves for several hours, the Red Spider will entirely disappear. Repeat this occasionally when the weather is suitable, so as to destroy any spiders that may hatch out from eggs previously deposited. This will be found a most effective remedy at seasons when the weather will allow of tender plants being removed to the open air.

F. MITCHELL.

Innerkip, 10th May, 1894.

A FEW THOUGHTS.

DEAR SIR,—I take this opportunity of sending a few thoughts to you. I am greatly pleased with your valuable journal on fruit growing. I commenced fruit growing some thirty years ago. I commenced with one tree, which was seedling or natural fruit. I bought seven trees from Mr. Hubbard, Guelph, being greatly opposed to agents going selling worthless trees from the States and elsewhere. I purchased fifty trees from Mr. McNaughton, which proved to be Culvers, very fine ones. The next purchase, I presume, was from your father, old Dr. Beadle, of St. Catharines, being fifty-eight apple trees, one pear, and one plum—fifty of which grew. My neighbors bought a lot—all of which died. The collection comprised Snow Apple, King of Tompkins, Saxon, Gloria Mundi, Talman Sweet, Rambo, Gravenstein, Wabash Harvest, Golden Pippin, Pound Pippin, Green Pippin, and Greening. The Greening proved worthless, being destroyed with Codlin Moth. We succeeded in catching him by rapping an old rag round the body of the tree. The Snow Apple is literally useless, with scabs and small; also some blight came over the trees. The plum was killed with black knot. The pear got destroyed by accident.

Mr. Editor, I am very fond of trying experiments in grafting. I had a blue plum tree entirely covered with black knot, about three inches across. I took my saw, saying to myself, I will cut you off and graft you, if you die it is no matter. I put in two grafts of the Loubard variety, they both grew beautifully and bore bushels of plums twenty years, and not a sign of black knot. I grafted a number of apple trees last year, none of which grew. I attributed my failure to cold weather. I also tried a rose bush, but it failed to grow. I had a prairie change its color from a dark-black to a beautiful

pink, and from single to double. I attributed this to the action of the bees carrying the inoculation from the one to the other. I purchased a number of fine pear trees to experiment on, Mr. Editor being too late to let us know he had such valuable ones for sale, I being partial to his nursery, the other trees having done so well. You sent us a fine picture of a gooseberry found in a hickory stump, but you did not give the price of it, nor where it could be got. A kind friend sent me some grapes to the express office the other day, but did not give their names. I also expected one from the Fruit Growers' Association, but it did not come.

Now, in conclusion, Mr. Editor, we wish you to be long spared to occupy the editorial chair. We will not complain like that old crabbed Scotchman, telling you you were a paid functionary, and putting fine pictures in your journal to attract attention. I think they look beautiful, and make quite an attraction in this fast age. I was very highly entertained by Mr. Charles Arnold, of Paris, while passing there on business one day. He showed me his beautiful roses, grapes, and his experiments on wheat by hybridizing.

I remain, &c.,

JOHN LAING.

Puslinch, Corwhin P. O., Ont.

BEST DESSERT APPLES.

I have recently assisted to award the prizes for fruit at two large autumn shows, a circumstance which has given me an opportunity of testing the quality of various varieties. In each instance a class was provided for a single dish of ripe apples, and we were supposed to taste each dish. At one place there were forty exhibits, at the other about thirty, and though it might appear somewhat of a lottery to judge so many by taste, I nevertheless think we were

right in giving the preference in both instances to good samples of Cox's Orange Pippin. The next best were Blenheim Orange and Ribston Pippin. Of the three sorts Cox's is decidedly the most generally profitable. It is not a very vigorous grower, seldom fails to yield a crop of medium sized roundish ovate fruit, fairly well coloured, and when ripe, say any time from October to January, seldom failing to please the most fastidious. We have very few apples which possess so many excellent qualities, and room should be found for one or more trees in the smallest of fruit growing gardens. Blenheim Orange is another invaluable variety, being surpassed by none for culinary purposes, and for dessert it is equally well adapted. In our case the largest fruits are sent to the kitchen, while the highly coloured medium sized ones are reserved for dessert. Unfortunately, being a very vigorous grower, young pruned trees are not fruitful; it is when large standards are formed that heavy crops are the result. It is really the most valuable market apple we have, and one which will command a good price when other sorts will not pay for carriage and salesmen's commission. The shape of the fruit as well as the colour varies considerably, the result probably of employing different stocks rather than the effect of soil. Its season is a long one, frequently extending from November to the end of January. With market growers it is essentially a Christmas apple. Ribston Pippin is perhaps the best known of the selected trio.—*The Garden.*

NOTE BY THE EDITOR.—The above extract will give our readers a valuable hint as to the varieties of apples that are most esteemed in England and what to grow for that market. All of them can be grown here, and when grown

here are both more highly coloured and more highly flavored than when grown in England.

LONGFIELD APPLE.

This Russian apple is said to have been raised from seed by an Englishman residing on the Volga. Mr. Chas. Gibb in his valuable paper on Russian fruits, which will be found in the report of the Fruit Growers' Association for 1883, says that it has been imported true to name, having been received from Moscow by Prof. Budd of the Iowa Agricultural College, and having also been received by the United States Department of Agriculture by the numbers 161 and 587. He says that it is a hardy tree, but not as hardy as the Duchess of Oldenburgh; that the fruit is of fine quality and of a bright attractive color, ripening in early winter, and of medium or below medium size. Mr. Tuttle, of Wisconsin, says that on account of its regular annual bearing, good quality and attractive color, he would not hesitate to plant it largely for market purposes. Mr. D. H. Carpenter of Wisconsin, says that the season is from January to June, which would seem to be much later than the time of ripening indicated by Mr. Gibb; that the fruit measures from three to three and a half inches in diameter, in form round, ribbed; color light yellow in the shade with a dark red cheek on the exposed side; skin thin; flesh very white, tender, rich, mild sub-acid; quality delicious; the best of all the Russian varieties that he has tasted, and in his opinion will compare favorably in quality with the best eastern varieties. The tree, he says, is vigorous, healthy, hardy, and enormously productive, and will, in his opinion, soon come into general use, being when everything is taken into consideration decidedly the best winter

apple they have in Wisconsin. This is certainly great praise. We had supposed that the Wealthy was the best winter apple yet grown in Wisconsin, and as hardy as the Duchess of Oldenburgh.

ASPARAGUS.

At a recent meeting of the Massachusetts Horticultural Society, Mr. William H. Hunt, of Concord, said that Asparagus is grown very extensively at Concord, some growers having as much as eight or ten acres. Only one crop can be got in a season, and near Boston, where land is more valuable, it must be devoted to such plants as will afford two crops. At Concord land is cheaper, and there is much light soil, unsuitable for grass, where asparagus can be profitably grown. The rent of the land is not counted at all. If it is possible to get the plough down deep enough, there is no necessity for using the spade. The rows are planted four feet apart, and the plants from fifteen inches to two feet apart in the row. If a crop is wanted quickly it is planted closer, but the bed does not last so long. There is no insect enemy of any account; the speaker has never seen the asparagus beetle, which is troublesome in some places. The crop is never very profitable, but on the other hand, failure is never known. In a warm season the time for cutting will be shorter than in a cooler one. The receipts are three hundred dollars or more per acre, somewhat in accordance with the amount of manure applied, which is generally eight or ten cords. Some fertilizers are used; nitrate of soda or phosphates, or a mixture of them, may be applied one year in three. There is a difference of opinion in regard to the use of salt; the speaker thought that the same money put into manure would do more good than if expended for salt. He

had used saltpetre waste from a powder factory, which contained a small amount of nitrogen. He did not know why asparagus could not be improved by selection, and believed it would be just as advantageous as with any crop. One grower sorts his asparagus into two grades; the speaker could not say that the larger is any better than the smaller, but it brings a higher price.

FRUIT PROSPECTS IN CENTRAL ILLINOIS.

Apple trees that were in good condition in the fall, have passed through the late cold snap safely, and are well supplied with fruit buds for next season's crop; but those that were injured a year ago, and only partly recovered last summer, now give evidence of being so badly injured as to unfit them for any purpose but the wood pile.

Pear trees are apparently unhurt, and promise more than an average crop of fruit.

Peach buds are, of course, all killed, and the effect of two such terribly cold winters in succession will be fatal to most of the trees.

The few cherry trees that survived last winter's freeze were in poor condition to endure the ordeal of the present winter, and very few of them will ever leave out again. We shall have no fruit.

Black raspberries are all killed to the snow line, and we shall have no fruit to speak of. Turner is safe, and will yield the usual crop.

Lawton and Kittatinny blackberries are in the same condition as raspberries, and for the first time in my knowledge Snyder is somewhat injured in the bud.

Strawberries, having been covered with snow during the severe weather, are, of course, safe.—*Farmer and Fruit Grower.*



WILSON JUNIOR BLACKBERRY.

Judge William Parry, originator, writes thus in regard to his promising seedling:—

“Desirous to perpetuate the good qualities, large size, and earliness of Wilson Early, I selected berries which measured three inches around in 1875. Reasoning from analogy and following the practice of the most careful breeders, who select the best animals, having the

greatest number of good points, to breed from, I selected the Wilson Early as the standard of excellence in blackberries, having the greatest number of good points to be transmitted to its offspring, and planted seed of the largest berries from the thriftiest and best plants, in preference to procuring accidental plants, which had no pedigree or back record to commend them.

Out of hundreds of seedlings thus grown from the Wilson Early we selected, as the most desirable to propagate the one called Wilson Junior which appeared to combine all the good qualities of the parent with some important additions. The fruit is large and early, is luscious and sweet as soon as black, holds its bright color and bears carriage well.

The plants are hardy and productive; canes round, long, slender, entirely free from rust; bend over and strike root at the tips; sends up but few suckers; spines small and recurved; foliage large and thumb or mitten-shaped, and generally has about the same appearance as its parent the Wilson Early). and is substantially a reproduction of the excellent qualities of that good old variety, in a new berry, ripening earlier, more productive, and more than a quarter of a century younger than the Old Wilson, from which it grew.

For several years the superiority of Wilson, Jun., over its parent, the Wilson Early, growing by the side of each other, and other varieties near by, was manifest; and last year, 1882, in a thirty acre field of blackberries, where all had an equal chance, seven rows of Wilson, Jun., yielded twenty-four quarts of berries per row at the first picking, being more than all others together in the field. At the second time the Wilson, Jun., yielded fifty quarts per row being more than the Wilson Early, or any other variety in the field, and continued to pick as well during the season. A new seedling blackberry of such excellence, combining and perpetuating the good qualities of its parent (the Wilson Early) with some improvement—earliness, productiveness, and evenness of ripening—is ample reward for the care and attention required for its selection and propagation.”—*Farm and Garden*.

FREESIAS

In the zealous search for novelties adapted to winter-forcing and to supply the insatiable demand for cut flowers, many hitherto neglected, though beautiful plants, have lately come to notoriety. Among those recently brought to notice, none are more beautiful nor deserving more attention than the Freesias.



FREESIA.

The plant grows from a small bulb to a height of about fifteen inches, and produces a great quantity of deliciously fragrant, tube-shaped flowers, borne in peculiar, one-sided racemes. The color of the flowers of *F. refracta alba*, the species represented in our illustration, is pure white spotted with yellow on the lower petals.

Their culture is very simple. In September or October they should be planted in ordinary potting soil, such as is used for Holland-bulbs, about six bulbs in a six-inch pot. They have then to be thoroughly watered and kept

cool and only moderately moist until growth commences, when more water should be given, and the pots removed to a warmer place. The succeeding treatment is exactly like that given to Hyacinths or Tulips forced in the house. Those planted in September may be had in bloom in January. After flowering, water should be withheld and the bulbs dried off, to be started again the following autumn.

For florists' work these flowers are remarkably well adapted, not only on account of their rare beauty and delightful fragrance, but also for their unusual keeping quality, on the plant as well as after being cut.

Decidedly this is one of the most deliciously perfumed flowers cultivated, and one or two plants of it in bloom will scent a whole parlor for which it will make a charming ornament. It will take the place which the Tuberose has in summer. The flowers come in clusters of eight or ten on a spike, seldom opening all at once, and last for quite a while. It is said to be very easily grown if planted in pots in October in rather sandy soil, and treated the same as Hyacinths or Tulips. As the bulbs are cheap we would recommend to give them a trial.—*Farm and Garden.*

FORESTRY.

TREE PLANTING.

Mr. Phipps is busy working up his report on forestry, and it is to be hoped that the subject will be so agitated this winter, that next spring a boom in tree-planting will break out all over the province. In France they understand these things better, and 9,000 miles of the public roads are planted with lines of trees, forming beautiful avenues. Step across the border into New York State and you will find the roads lined with trees, no hideous fences, and every little hamlet, spruce and clean, with

its village green and liberty pole. Now, how does our side of the border look? Why, it looks like the graveyard of Hope, the burial place of all public spirit, and nine-tenths of the villages look as if they were the last place made, and the Creator having run out of material left the job unfinished. The province is old enough to show some taste, and it is high time our people shook themselves out of their torpor, and imbibed a little of the public spirit of our American neighbours.—*Bobcageon Independent.*

COLUMBINES.

With the introduction of the newer Western species of *Aquilegia*, which is the botanical name of the genus, these beautiful perennial plants have received renewed attention. All the species found in cultivation are worthy a place in the herbaceous border. In addition to these, hybridizers have created so many hybrid and crosses as to almost obliterate some specific distinctions. The various shades of violet, red, and yellow are the predominant colours of their flowers, and a white Columbine of good shape and size has long been sought for. Such an one has recently been discovered in the Rocky Mountains, and is now brought to notice under the name *Aquilegia cœrulea Jamesii*. The flowers are pure white, very large and of remarkably graceful habit. It is easily grown from seed, and if sown early in pots in the house or in a hot-bed, flowering plants may be obtained the first year. Sown in spring in the open ground it will bloom the following season. If the plants come up too thick, they have, of course, to be thinned out, and the young plants may be transplanted. A moderately rich, rather dry soil suits them best. They are perfectly hardy, yet they are materially benefited by a light covering of leaves during winter.—*American Garden.*

HARDY PEARS.

Prof. Budd, of the Iowa Agricultural College, who lately visited Russia, writes thus to the *Prairie Farmer* :

The pear is not native to this continent and the race with which we have measurably failed is native to the west coast of Europe, where the climate is modified by the Gulf stream precisely as is the west coast of the United States.

In Western Poland the Flemish Beauty is much grown under the name of Belle of Flanders, with many other varieties of this grade of hardiness which we have not yet tried.

In Eastern Poland, and over the great plain north of the Carpathians to Kiev, in Russia, and Proskau, in Silesia, the Flemish Beauty utterly fails, but many varieties of excellent pears are grown that are hardier in tree, and with foliage that can bear greater extremes of summer heat and aridity and moisture of air. One of the least hardy of this family is the *Bezi de la Motte*, which has come to us as a stray and is worthy of trial on favourable soils south of the 42nd parallel.

Still east and north of Kiev, to Kursk, in Russia, we find the wild pear coming in as a forest tree, and we find in orchard many varieties of the Bergamot and Grucha type of tree and fruit not before seen, excepting the Red Bergamot and Bessemianka which were common with peasants in Eastern Poland.

East and north of Kursk on the interminable black prairie to Tula, Oriol, and Veronesh, we still find healthy and fruitful pear trees, showing in tree a cross with the indigenous pears, but as commonly grown by the peasants they run more to varieties for culinary use than dessert, yet on the grounds of large proprietors, and in the experimental orchards of the pomological

schools, we found from fair to good dessert pears growing on trees showing little if any signs of injury from extremes of summer and winter temperature, more severe than we ever experience in Central Illinois or Iowa.

Still east and north, on the west bank of the Volga, at Simbrisk, we saw more cooking pears going to waste than we had seen during a life-time at all other points. Yet as a rule the pears grown here are on the seedlings and the surplus going to waste was too low in grade for sending to a distant market. Yet some of the seedlings and all of the grafted varieties found on the grounds of systematic cultivators and amateurs, we would call very valuable for either culinary or dessert use, yet this point is on the 54th parallel of north latitude, and perhaps 1,200 miles inland from the Baltic. The prevailing southeast wind at this point is hotter and drier than we ever know, and 45 deg. below in winter, without snow, is by no means unusual.

North of this point, and six hundred miles east of Moscow, we still found the cooking pears hardy enough to permit their use for street trees, and some of the Bergamots and Gruchas were better than some of the California pears I have tried to eat. At the extreme northern point, where the pear may be profitably grown on the upper Volga, the annual rainfall is as light as in Western Dakota, and the winters are too severe for any of the Borovinca race of apples to which our Duchess belongs, and our Box Elder freezes down each winter in the botanical garden at Kazan.

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HARDY BLACKBERRIES.

In reply to your enquiry as to how Snyder, Taylor and Wallace blackberries have stood the cold of January 5th—when the mercury here indicated 25° below zero—it gives me pleasure to say that at least two of them, Snyder and Wallace, are uninjured, and promise a full crop during the coming season. Taylor's Prolific is somewhat injured, but will likely produce half a crop. Early Harvest is killed to the snow line, and Western Triumph and Kittatinny have fared but little better. Stone's Hardy promises to be as hardy as Snyder. About half the Early Richmond cherry buds are killed; peach buds all dead; Concord, Clinton and Worden grapes in good condition; apples ditto; black raspberries much injured; reds, like Thwack, Turner and Cuthbert, alive to the tips; strawberries in excellent condition.—*Cor. Farmer and Fruit Grower.*

THE FAMEUSE OR SNOW APPLE.

The Fameuse is an apple of Lower Canada, and grows in great perfection upon the Island of Montreal in and around the city and vicinity. It is the favorite dessert apple of the Montreal people, and the market price is more often above than below \$3 per barrel. There the Fameuse thrives in perfection, being larger and fairer, and the trees more long lived than anywhere else. Part of this is due to the soil, which is deep and rich yet not very heavy. The Fameuse cannot be successfully grown on a strong clay soil. It likes limestone, and the only place where it does nearly as well as at Montreal is on the islands and shores of Lake Champlain, which is a limestone basin. But as the soil is not so deep and moist there as on the St. Lawrence, the fruit does not grow so large. But at its best the Fameuse can only be called a medium

apple in size, and usually only a small medium.

Where the Fameuse is not perfectly at home it begins to show its faults as a market apple. It becomes too small and begins to be scabby. This is the trouble with us here. I have about sixty bearing trees, and usually only from one-half to two-thirds of the crop is marketable. But as the Fameuse is a prolific bearer and the fruit is here very much liked and greatly in demand, it still affords a profit.—*Dr. Hoskins in The Home Farm.*

WHORTLEBERRIES.

I have been experimenting with the whortleberry now for five years. I find them to grow finely under cultivation, and there is no discount on their bearing qualities. It takes them long to get well established in their new quarters (some three years or more), but after this they begin to bear profusely and will increase every year for a lifetime, I suppose, and every year the crop is heavier and the berries are much larger than in their native wild state.

The stools keep spreading on all sides all the time from shoots, like the hazel, and when they get too many these can be removed for starting new plantings. There is no difficulty in getting them to grow, if done properly; that is, take up as much of the old roots as possible when removed from the woods, and they should not be exposed long to the wind or sunshine to dry out the roots. I find this to be the great trouble in transplanting them from the woods—suffering the roots to get dry. I have some that I got from Michigan that bore a few berries last summer, the second season after setting; these were nice large berries but a great deal softer than our native kinds. We have two distinct kinds here. One is a tall grower, with red twigs and oblong fruit, and very blue; the other a low bush or

shrub, grows from one to two feet high, the twigs about the color of the ozier willow, fruit more black and cherry shaped, generally larger than the blue or oblong. The leaves are also different. I find the oblong to differ in flavor from different patches. Some are a good deal sweeter than others, like black-berries from different localities.

I have never tried to manure them as yet, in fact I don't think it necessary as they grow on very poor land among the rocks and gravel, and sometimes in a bed of sand. I notice those that grow in sand to be the most thrifty bushes. Old beds of forest leaves seem to suit them as well. This is all the manure I used on mine. I notice that the older they are the taller the shoots will grow in one season. I have now no doubt of making a success of them.

-Cor. Fruit Recorder.

GRAPES IN THE UNITED STATES.

The *Florida Dispatch* says:—"From statistics recently published by the Department of Agriculture at Washington, we learn that there are now 185,583 acres of grapes grown in the United States. Wine from the product of these vines is made to the amount of 24,453,857 gallons, having a market value of \$13,436,174.87. California of course leads, having one-sixth of the area, yielding nearly two-thirds of the wine. New York comes next, having 12,643 acres, though but little is made into wine; the grapes find ready sale in the market; only 584,148 gallons are made. Rhode Island only returns fifty-five acres; while Illinois, from 3,810 acres, makes over a million gallons of wine. Missouri, Ohio, Georgia, and New Mexico are leading wine-making sections. Colorado cuts no figure at all in the report, but the day is coming when grape culture will be one of their prominent industries.

THE IONA GRAPE.

This excellent grape seems to be giving good results in California. It will not ripen well in the colder portions of Ontario. The most beautiful grape of the season, for color, taste, grace of cluster, and rich ripening quality is the Iona. It is a first cousin to the Catawba with an Isabella spice. It is a glowing, translucent garnet, with a purplish bloom, and ought to make a favorite table grape, as, framed in its own olive-green leaves and tendrils, with yellow pears for contrast, no prettier centre-piece for a dainty lunch or dinner-table could be devised. Only a few of our vintagers as yet have found out how well this grape does here, but those few are making it a specialty."—*Santa Barbara Press*.

BOOKS RECEIVED, ETC.

CATALOGUE OF SELECT ROSES, Ellwanger and Barry, Rochester, N. Y.

SUPPLEMENTARY LIST of novelties and specialties for sale by Ellwanger & Barry.

THE THIRTEENTH ANNUAL REPORT of the Michigan State Horticultural Society, full, as it always is, of valuable information.

SCIENCE, a weekly journal published by the Science Company at \$5 a year. No. 4 Bond Street, New York. Devoted to the interests of science.

PRIZE LIST of the World's Industrial Exposition to be held all next winter in New Orleans. The prizes for fruits are very liberal, collections of apples running from \$15 to \$200. Cannot the fruit growers of Ontario take some of these prizes. The Editor of the *Canadian Horticulturist* will send a copy of the prize list to any one who applies therefor.

THE MILKING HOUR.

You good old Boss, stand quietly now,
 And don't be turning your head this way ;
 You're looking for Donald, it's plain to see,
 But he won't be here to-day.
 Nobody came with me, dear old Boss,
 Not even to carry my pail ; for, you see,
 Donald's gone whistling down the lane,
 And Donald is vexed with me.

And all because of a trifling thing :
 He asked me a question, and I said " Nay."
 I never dreamed that he would not guess
 It was only a woman's way.
 I wonder if Donald has ever learned
 The motto of " Try and try again."
 I think, if he had, it might have been
 He had not learned in vain.

And there needn't have stretched between us two,
 On this fair evening, the meadow wide,
 And I needn't have milked alone to-night,
 With nobody at my side.
 What was it he said to me yester eve,
 Something about—about my eyes ?
 It's strange how clever that Donald can be ;
 That is, whenever he tries.

Now, Bossy, old cow, you musn't tell
 That I've cried a little while milking you ;
 For, don't you see ? it is nothing to me
 What Donald may choose to do.
 If he choose to go whistling down the lane,
 I chose to sing gayly coming here.
 But it's lonely without him, after all ;
 Now isn't it, Bossy dear ?

I—hark ! who's that ? Oh, Donald, it's you !
 Did you speak ?—excuse me—what did you say ?
 " May you carry my pail ? " Well, yes : at least,
 I suppose, if you try, you may.
 But, Donald, if I had answered No,
 Do you think it would have occurred to you
 Not to be vexed at a woman's way.
 But to try what coaxing would do ?

M. D. BRINE, in *Harper's Weekly*.

LIGUSTRUM FORTUNEL.—This Privet is really grand when in a thriving condition ; and as to soil or situation, it seems, like the common kind, to be one of the most accommodating of shrubs. Its leaves are arranged more regularly along the shoots than in the other species, while the smaller branches push forth almost horizontally from the main stems. The white, feathery flowers are very sweet scented—too much so, in fact, for use in a cut state. Another name by which this Privet is often known is *Ligustrum sinense*.—*The Garden*.

THE FLOWERS OF BURNS.—No evidence is needed to show that Burns was fond of flowers ; his pathetic lament for the Daisy which fell under his ploughshare is ample proof of that. Carlyle, however, in his essay on the peasant poet, quotes one of

his letters in which he thus speaks of his favorite blossoms : " I have some favorite flowers, in spring," he says, " among which are the mountain Daisy, the Harebell, the Foxglove, the wild Brier Rose, the budding Birch, and the hoary Hawthorn, that I view and hang over with particular delight " Tell me, my friend, to what can this be owing ; are we a piece of machinery, which, like the *Aolian* harp, passive takes the impression of the passing accident ? or do these workings argue something within us above the trodden clod ? Burns' respect and love of the " wee crimson tipit flower " was, indeed, only exceeded by the devotion which Chaucer paid to it, as to all that was bright and sparkling among field blossoms.

IMPORTS OF FOREIGN FRUIT.—The *Journal of Commerce* has published a full report of the imports of foreign fruits into the port of New-York. By it we learn that there were brought 953,837 cases and boxes of oranges from Sicily, Italy and Spain, containing 244,270,290 oranges ; from the West Indies, Central and South America, 31,160,584 oranges, and from Florida 200,000 barrels and boxes. The total value was \$3,853,007. Of those coming from the Mediterranean, 33 per cent. were spoiled, and of those from the West Indies, 36 per cent. were lost. From the Mediterranean come 1,052,874 boxes containing 347,448,420 lemons, in which there was a loss of 20 per cent. ; also 108,797 barrels, and 10,667 half-barrels of grapes, valued at \$386,392. The loss was 25 per cent., on the passage. From the West Indies, Central and South America, there were received 2,555,320 pine apples, the loss on which was 20 per cent. ; 1,416,492 bunches of bananas, loss was 16 per cent., and 15,041,507 cocoanuts, of which the loss was 8 per cent. Beside these fruits, there were received 1,987 barrels of limes, with a loss of 35 per cent. ; 1,270 barrels of shaddocks, loss 10 per cent. ; 74,150 mangoes, loss 50 per cent. ; 25,600 grape fruits, loss 10 per cent., and 15,115 plantains, loss 15 per cent. Cocoanuts and Florida fruits came in duty free ; the total value of dutiable fruits was \$5,530,704, and the total duties received were \$951,924 45.