

THE
CANADIAN
Horticulturist.



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VOL. I.]

OCTOBER, 1878.

[NO. 10.]

THE ARCHIPPUS BUTTERFLY.

(*Danais Archippus*.)

If our readers will look at fig. 13, *a*, they will see how the caterpillar appears after it has suspended itself. Yet it is not motionless, but keeps continually stretching forth its head and bringing it in again, with very much the same motion as is made while feeding, with the edge of the leaf between its claws, beginning as far from itself as it can reach, and cutting it down as it draws the head in towards the body. What this movement of the head has to do

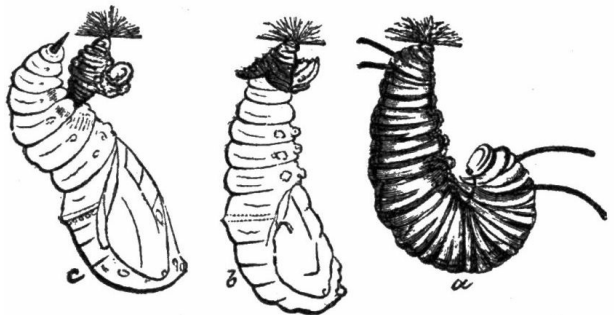


Fig. 13.

with the changes that are going on within its body we can not say, but for some reason it keeps up this motion with very little intermission until it is ready to cast off its skin. The approach of

this event may be known by its shrivelled appearance, the fleshy horns have become withered and almost dry looking, and the skin is wrinkled and thin. The caterpillar occasionally draws itself up and strains itself, until it succeeds in bursting the skin on the back not far from the head. And now commences a series of movements very difficult accurately to describe, but wonderful to look upon. The creature stretches and contracts its body with an astonishing rapidity, and at each movement forces the skin upwards, until it has reached the spot from which it is suspended. At the hinder, or what is now the upper, end of the body, there has been formed beneath the skin a black little spike, crowned at the extremity with a number of little hooks by which it is to fasten itself to the silken knob from which it is hanging. To withdraw this black spike from the shrivelled skin that envelopes it, and fasten its hooks into the little knob, so that it can hang there while the skin falls to the ground, is the feat now to be performed.

Fig. 13, *b*, represents the creature at this most interesting and critical moment. How shall it sustain itself in mid-air while this is being done? It has neither hands, nor feet, nor mouth by which to hold on and keep itself from falling. And yet it will do this very thing, and though the writer has witnessed this performance probably not less than a thousand times, he has never seen it fail to succeed. Who taught this creature how?

Look now at fig. 13, *c*, and you will learn how it is done. It seizes a portion of the skin between the joints of the upper portion of the body, and compressing the joints together, holds securely by the skin while it withdraws the black spike, and bending it over the mass of skin fastens the hooks with which the point is armed into the silken knob, and then, letting go of the skin, it wriggles itself about, bedding the hooks more securely in the silk, and working the skin loose from its fastening until it drops to the ground.

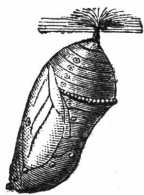


Fig. 14.

When this has been accomplished, it ceases its hurried movements, as though wearied by its own exertions, and slowly contracts the upper segments until it assumes the appearance shown in fig. 14. In a little while it will have become quite hard and motionless. If you touch it, there will be no evidence that it feels your touch, and to you it will feel cold and lifeless. But it is a pretty object to look upon, of a beautiful pale-green, dotted with gold, with a crimped band of gold margined with black more than half way around the body; it seems to be a casket containing something of more than common interest.

In about a week the chrysalis will begin to change its color, gradually growing darker until the green is entirely gone, and the colors of the butterfly within can be distinctly seen through its now transparent walls. The butterfly is now ready to come out of its prison, and while you are watching it a sudden crackling noise announces the fact that the chrysalis has been split, and the head and fore legs of the butterfly begin to appear, followed very speedily by the whole body. And it looks almost as if it were all body, for the wings are very small indeed, and seem to be but mere rudiments of wings, wholly unsuited to the purpose of supporting such a body in the air. The butterfly now seeks a place where the wings can hang freely, often remaining hanging to the empty chrysalis, or under surface of some support, to which it fastens by means of its claws. In this position the wings grow with a rapidity that is most marvellous. They are not folded up and merely unfolded, but actually grow from the size of the wings of a large bee until they measure four inches across, and that within thirty minutes.

The appearance of the butterfly when its wings are fully grown may be seen at fig. 15. The ground color of the wings is a bright orange-red, margined with black, and dotted with white spots in the black border.

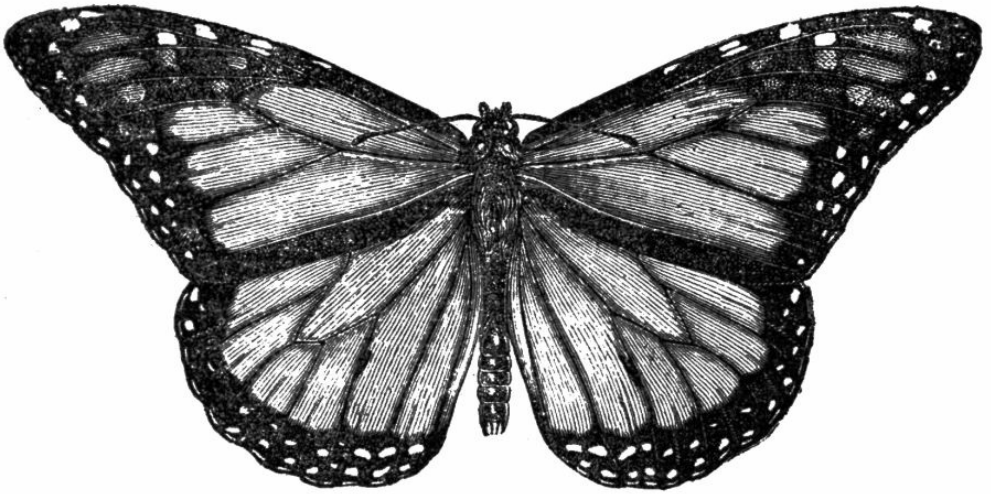


Fig. 15.

We have given this account of the history of this insect, not because it does any injury to our crops of fruit or grain, but because its history illustrates the metamorphoses of many other insects, and any who wish can easily rear it in confinement, and watch the changes it undergoes.

RISE AND FALL OF SAP.

It is a very commonly received idea that the sap of trees descends in autumn, and when the leaves fall, returns to the roots whence it came in the spring. It does not seem to have once occurred to those who accept this view of the matter, that there would be any difficulty in cramming a quart of water into a pint cup; perhaps, in order to accommodate the sap, the roots are supposed to be as large and capacious as the trunk and head of the tree; in short, that there is as much tree underground as above. Whence the idea sprang into existence that the sap retires to the roots on the approach of winter, it is not now possible to say, but its very general popular acceptance is an evidence of the way in which false views gain currency because some one ventures to make the assertion, and the public mind stops not even to weigh the probabilities, much less to investigate the ground upon which it rests. Surely the time has come when we should cease to accept assertions upon trust, and demand the facts on which they are based. Having these, we can consider the theory, and if it does not suit us we can make one for ourselves.

Now, in this matter of the sap, by which we mean all the fluids which are contained in the interior of a tree, the facts are these: if the trunk be cut in spring, the sap will run out; in summer, autumn, and winter it will not, except under exceptional circumstances. But nevertheless the sap is in motion in the summer and autumn, and winter too; nay, save when extreme cold may for a time interfere with its flow, it is always in motion; and the reason why it runs out of the trunk in

the spring is because it is then present in much greater abundance than at any other season of the year. During the summer, when the tree is covered with foliage, the leaves are evaporating large quantities of the fluid parts of the tree into the air, while another portion is being elaborated and converted into the tissues and structure of the tree, producing what we call growth. When the autumn has come, what with the evaporation and solidification that has taken place, the interior of the tree has become comparatively dry, so that the quantity of sap has become so greatly diminished that it no longer exudes when an incision is made. Our readers are, at least many of them, aware that if a branch be cut off from a grape vine in spring when the buds are starting, the sap will run out quite freely, producing what is called bleeding; but if the same branch were allowed to remain until the leaves on the vine have become fully expanded, then if it be cut off no bleeding will take place. The reason is, that the evaporation which is taking place in the leaves has exhausted the supply of sap to such an extent that there is no surplus in the vine to escape in that way.

The leaves being the principal organs of assimilation and perspiration, it follows that when they have fallen off there is no longer much loss of fluid to the tree from these causes. But the power of the roots to absorb moisture from the earth is not diminished by the loss of the leaves; they continue to draw fluid from the earth, and to send it up into the tree. This action continues, except as modified by extreme cold, all winter; the fluids are drawn from the soil by the roots and sent into the tree, and by the time that spring has come the tree is full of fluids and every vessel distended with sap. During the winter we are not able to find sap by cutting the tree, because the process of filling with fluid is gradual.

M. Biot, many years ago, made some very interesting experiments on the flow of sap, and made a contrivance by which the rate of motion could be measured at any season, and showed that there was considerable activity even in winter. He found that the direction in which the sap moved was very considerably affected by frost. When the weather was mild the sap was always ascending; but when it was freezing weather the sap flowed down. This he attributed to the contraction of the sap-vessels by the cold, which forced the sap into the larger vessels which were unaffected by the frost under ground. When, however, the frost was sufficiently severe and continued to reach the roots, then the sap was forced back into the trunk; but when it came on to thaw and the frost left the ground, the sap returned to the roots. Thus we see that, as a rule, the sap is always ascending, and that when it descends it is because it is forced to do so by some temporary cause, and when that cause ceases to act the sap immediately begins to ascend again.

In connection with the supposed ascent of the sap in spring, and growing out of it, is the popular idea that this ascent of the sap is the cause of the expansion of the buds and leaves. It would be nearer the truth to say that the expansion of the buds and leaves was the cause of the motion of the sap. Any of our readers can make the following experiment for themselves, and see the true state of the case. If a tree be cut into or tapped in some of the upright branches near the top very early in the spring, and be again tapped just below the branches on the trunk, and again just above the surface of the ground, it will be found that the sap will flow from the wound that is nearest to the top first, from the one just below the branches next, and last of all from the one near the ground. The reason for this is, that the light and warmth tell first upon the excitable buds at the extremities of the tree, and therefore the sap is set into an accelerated motion that lies nearest to them. The gentleman who first made this discovery came to the conclusion that in the spring the sap of trees descended instead of ascending, but he forgot that the moment the buds begin to expand they draw the sap from the parts nearest to them; this causes the sap just beyond to push upwards to supply the place of that taken up by the buds, and as the buds increase and expand is this absorption increased, and the circle of motion enlarged from the buds downwards.

Were it not true that the sap is constantly ascending, we should lose all our evergreens during the very first winter, for the evaporation that goes on in winter from their leaves would soon

season the wood of the tree were it not made good from the roots below; and hence it is that some evergreens are killed by a severe winter while they are small, which would survive without injury had they attained to a greater size; for, being small, the roots have not penetrated to sufficient depth to reach below the frozen ground, and consequently can not draw from the frozen earth in sufficient quantity, nor with sufficient rapidity, to supply the waste by evaporation; whereas when larger the roots will have penetrated quite below the reach of frost, and will be able to draw from the soil sufficient moisture to supply the loss.

TOMATOES.

Messrs. John A. Bruce & Co., seedsmen, of Hamilton, give considerable attention to the testing of the different varieties of vegetables, and after thorough trial find in their experience that Hubbard's Improved Curled Leaf is the earliest. It is small compared with many of the later sorts, and the plant is of a dwarf habit. Next to this they place the Early Conqueror, which is of good size, and very uniform in shape. Then the General Grant, a firm fleshed, bright crimson, productive variety, for the main crop; and after it the Trophy, for a later variety, one of the largest and best flavored of them all. These four sorts, ripening in the order named, they consider the best market sorts. We have found the General Grant very productive, and to ripen its fruit rapidly after it once begins to come in.

THE MONTREAL HORTICULTURAL SOCIETY, AND FRUIT GROWERS' ASSOCIATION OF PROVINCE OF QUEBEC.

It is gratifying to learn that our sister Province of Quebec has succeeded in organizing a provincial association similar to our own, and standing in a similar relation to the government. It has a double existence, arising from its union with the Montreal Horticultural Society, and, as that society, it holds an annual exhibition in the City of Montreal, with a city membership paying an annual fee of two dollars, while, as the Fruit Growers' Association, it publishes an annual report, as an appendix to the provincial agricultural report, and charges the rural members one dollar per year.

Will it seem boastful to say that, from the experience of what has been done in Ontario, we are confident a career of great usefulness is opening up before our sister society; that a vast amount of useful information locked up in individual experiences will now be brought out, and made the common stock of all; that many valuable seedling fruits will be brought from their modest retirement and disseminated, to enrich the orchards and gardens of the whole Province; that a medium of communication will be established between all the fruit growers, that will make them to know and esteem each other, and stimulate to harmonious efforts for the advancement of

pomology; and that an increased impetus will be given to the cultivation of fruits, to the originating of new and valuable varieties, and the diffusion of information on all matters involved in the growing of superior fruit.

There is no department of the work accomplished by these associations more productive of benefit to all, than the meetings for discussion of topics in which all have an interest. By means of these discussions, the experiences of many practical cultivators are brought together, and whether they are experiences of success or failure, they throw light on the subject, and serve either as beacon lights to give warning of the danger, or as finger posts to guide into the best and safest way. Many have been saved the trouble and vexation of testing worthless varieties, the experience of one being made the experience of all. Again, when a fruit has proved itself valuable in the hands of one cultivator, there is reason to believe that it will also be valuable in the hands of many.

These meetings for discussion will be the more interesting and valuable the more those who attend them accurately observe the facts that come within the range of their individual observations and experiences, and come to the meetings prepared to impart what they have gathered. We remember hearing a very successful grower of grapes say, when asked about the cultivation of them, that he did not know anything about growing grapes. The trouble with him was that he supposed that everyone knew all that he did on the subject, and merely meant that he had no special method peculiar to himself. He was far too modest; experience had taught him much that others did not know, and it is the giving out of this experience from all that increases the knowledge of all.

THE GRAVENSTEIN APPLE.

Those readers of the *CANADIAN HORTICULTURIST* who are best acquainted with this apple, will fully corroborate anything that can be said in its praise. It derives its name from the place of its birth, Gravenstein, in Holstein, Germany, and has the reputation of being one of the best apples of Northern Europe. The reputation it enjoys there has been fully maintained by it in America, and here it ranks as one of our very best and most valuable October apples. It has been widely disseminated throughout the Dominion, and is highly esteemed. The trees thrive well in Nova Scotia, and certainly in a large part of Ontario, having been reported as bearing fruit in the county of Renfrew. They are of an upright habit, stout bodied, and form large, spreading heads; come into bearing early, and are very productive.

The fruit is of large size, and when ripe is of a bright-yellow color, most beautifully striped and splashed with various shades of red and orange. The flesh is tender, crisp, and juicy, with a high aromatic flavor; in quality ranking "best." It is excellent as a cooking apple, and as valuable for the dessert, pleasing to the eye by reason of its beauty, and delighting the palate with its exquisite flavor. In the markets it always commands the highest price of any of its season, and on that account may be profitably grown in limited quantity for a convenient market.

It is not desirable to multiply fall-ripening varieties of apples, indeed we already have too many of them for profit. The wise plan will be to select two or three of the very best, and plant enough of these to meet the demand. A very few kinds will meet the wants of the family, and fewer yet will be enough for market. It is a great mistake, but one that is very often made, that of planting out a great many varieties of apples. The experience of all who have grown fruit for

profit coincides in this, at least, that a large quantity of only one variety of saleable apples is much more remunerative than the same quantity made up of a great number of kinds.

AUTUMN MEETING.

The usual autumn meeting was held in the Town Hall, at Sarnia, on Wednesday, the eleventh day of September, 1878. President Burnet being absent at the New York State Fair, the Secretary called the meeting to order, which was duly organized by choosing Chas. Arnold, of Paris, chairman. After the reading of the minutes, Messrs. Ebenezer Watson, George Mill, and Townsend G. Vidal were appointed a committee to examine and report upon the seedling fruits exhibited; and Messrs. Joshua Adams, Hugh Smith, and Chas. Duncan, a committee to prepare subjects for discussion. While the latter committee were considering their report, the meeting proceeded to the discussion of pear culture and pear blight.

W. Mowbray grew pear trees in clay soil, in what used to be a garden, but was now in grass, he had not seen any blight, but some varieties winter killed; had found the Flemish Beauty the most hardy. E. Watson had succeeded in getting some very fine pears, but the blight has always destroyed his trees. Near the water the crop of fruit this year is good, but on farms away from the lake shore, the late frosts injured it very much. James Watson had not suffered much from pear blight until lately. His trees are growing in clay soil on the bank of a creek, in the Township of Moore. Bartlett is too tender, Beurre d'Anjou has stood the winters, Doyenne d'Ete, and Beurre Clairgeau stand well, Clapp's Favorite does well, is hardy and good, Flemish Beauty has not suffered in any way. Thought he had greatly benefitted some of his pear trees which showed blighted spots on the trunk, by wrapping over them a mixture of clay, sulphur, and lime. Charles Duncan said that Flemish Beauty and Clapp's Favorite promise to be hardy, and suited to the climate of his section, Township of Moore, and that there had been no blight on these varieties with him. Had found leached ashes very beneficial to fruit trees. Thos. Watson, of Sarnia, had found Flemish Beauty and Clapp's Favorite, and indeed all sorts of pears, to lose their leaves, they would spot and curl up. Joshua Payne said that Flemish Beauty does well, though some of the trees blight, the Bartlett does well, also the Seckel, Clapp's Favorite, and Beurre Clairgeau. Thinks the pear trees do better without cultivation, but spreads a little manure occasionally on the surface of the ground around the trees, which acts as a mulch, and keeps the ground from cracking in drouth. Thomas Watson said that he used saw-dust and chips as a mulch, and found that his trees were infested with the borer, and asked if this mulch was the cause of the attacks of the borer. W. Saunders replied that it was not the cause, and that if an alkaline wash were applied to the trees it would prevent the borer from attacking them, it would prevent the beetle from laying its eggs, or kill them if laid. That it would not kill the borers however if they have got into the tree. E. Watson had never mulched his trees with saw-dust or chips, but had plenty of borers. Jas. Dougall, of Windsor, was asked in regard to Eliot's Early Pear, and replied that it was larger than Doyenne d'Ete, a week earlier, and superior in quality. The tree is a strong grower, and very hardy.

The committee on subjects suggested for discussion the question, what varieties of fruit are successfully cultivated along the shore of lake Huron and the river St. Clair; and how far has the fruit crop in that district been injured by the spring frosts this year? Thos. C. Wheatley, residing near the lake in the Township of Sarnia, said that he had grown only apples and peaches. Of the

summer apples, he grew Early Harvest and Red Astracan, the latter had proved the most profitable. The Porter yields well, but is not so marketable as a red apple; he wants a good red apple, ripening after the Red Astracan, for market purposes; has just planted the Benoni to see how that would answer. Rhode Island Greening fruits abundantly, has a good reputation, and is inquired for by purchasers. The Baldwin is not so even in size, and hence not as profitable. Cayuga Red Streak bears when young and abundantly, but the fruit is too large, prefer to handle smaller apples. The Spitzenburg spots and cracks badly on my sandy soil. Pewaukee has just fruited with me. Have planted largely of Early Crawford, but have not found them to be good bearers, they never have given me more than a quarter of a crop. Hale's Early has done very well with me; at first it did not, but as the trees grew older the fruit rotted, yet I found it more profitable than the Crawfords. Late Crawford generally ripens, but it is not much more prolific than Early Crawford. Serrate Early York does well, but the Large Early York is unproductive. Am pleased with the Amsden; and old Mixon succeeds well, it is large, attractive, and profitable. The frost did very little injury to large fruits in my vicinity, but the strawberry crop was seriously hurt. Raspberries were a fine crop. Peaches were not hurt by the May frost, though we had from two to five degrees of frost. D. Nesbit, of Plympton Township, stated that peaches frequently winter-kill at his place, which is five miles from the lake shore. The seedling peaches were not injured by the late frost, but it seriously injured all the grape vines. With the exception of the Oswego Beurre, which has a good crop, my pear trees have no fruit this year. My soil is clay with a mixture of gravel. James Watson has found that in his stiff clay soil the peach trees do not stand the winter, but die out. James Johnson, of Bosanquet, remarked that on the lake shore apples do well, there being no summer frosts to hurt; this year there is a good crop along the lake for a strip about a mile in width, but further back the frost of last May has seriously injured the fruit. Have found the Old Mixon Peach more hardy than Hale's Early or the Early Crawford. The Concord, Adirondac, Salem, and Isabella grapes ripen well. Plums do well if the trees are jarred and the Curculio destroyed. John Carr, Sarnia Township, says he can not grow peaches well, they winter-kill. Pear and cherry trees do well. Plums rot badly. Have a good crop of apples this year. James Dougall, of Windsor, advised that the rotting plums be gathered as fast as they appear, and taken away from the vicinity of the trees, so as to prevent the rot from spreading. T. D. Watson, Sarnia Township, found all the cultivated peach trees to die down to the ground. The Sweet Cherry trees and the Maydukes did not bear any fruit, did not blossom, though the trees grew well. Seedling peach trees grew and bore fruit. Is too far from the lake to feel the beneficial effects of the water, the late spring frosts this year having killed the fruit in his neighborhood, while close to the lake and river there was a good crop. James Watson, Moore Township, said that cherry trees, even the Mayduke and Kentish, will not thrive on the clay soil with us, but on the sandy soil they do well; and Charles Duncan added, that we are very subject to summer frosts, which usually injure all our fruit crops. Hugh Smith, of Sarnia, remarked that in that vicinity, what was usually called the Kentish Cherry grew freely from suckers, was hardy and productive.

Inquiry was made concerning the borer in the peach tree, but it did not seem to prevail to any serious extent in that vicinity. W. McK. Ross, of Chatham, complained that it was very bad there, and that he had suffered severely from them. He had also found a snapping or click beetle, brown, and about half an inch long, laying eggs in crevices of the bark near the collar of his peach trees. W. Saunders, London, replied that the larvæ of the click beetles do not bore into living trees, hence no danger was to be apprehended to the peach trees from this source. The *Ægeria Exitiosa*, which bores our peach trees, looks very like a slender wasp, with a steel-blue body, and in the female the abdomen is marked with a broad orange-colored belt. She lays her eggs upon the tree at the collar, which hatch out and bore into the soft bark at the surface of the ground. Driving nails into peach trees has no effect upon the borer, nor will boring holes into

plum trees and filling them with sulphur have any tendency to keep away the Curculio. John Bartlett, Warwick, inquired about the Utah Hybrid Cherry; to which James Dougall, of Windsor, replied that it is not a cherry, it is more nearly allied to the plum, it is only a small bush, and the fruit is worthless.

On the best remedy for the Curculio, the weight of opinion seemed to be that, while in a small yard of plum trees chickens might answer a very good purpose, in larger orchards the best, most convenient, most expeditious, and least troublesome method, was that of jarring the trees and catching the Curculio on a cotton sheet.

Hugh Smith, Sarnia, illustrated his method of changing dwarf trees to standards, by planting a seedling at the foot of the tree, and inserting the top under the bark, thus forming a connection between the tree and the earth through the young seedling.

It being asked what kinds of trees were best suited for shelter, Messrs. Arnold, Beadle, Saunders, and Dougall mentioned the Norway Spruce as being one of the most desirable, it being easily transplanted, particularly when small, thriving in all soils, very hardy, a good grower, retaining its branches to the ground, and capable of being cut and trimmed in any desired manner. W. McK. Ross mentioned the Arbor Vitæ and the Scotch and Austrian Pines. John Bartlett had found the English Thorn to make an excellent hedge.

The scraping of the bark of apple trees was thought by James Dougall to be injurious, but an alkaline wash beneficial, such as thin soft soap, which he thought better than lime. T. C. Wheatley thought that healthy trees did not need scraping, the rough bark would drop off. W. Saunders thought the scraping off of the rough bark was useful, because by that means so many insects were dislodged and killed, especially the larvæ and cocoons of the Codlin Moth, while the tree, he thought, was not injured by taking it off.

Conflicting opinions were expressed concerning the Robin, Cedar Bird, Red-Headed Woodpecker, and Baltimore Oriole, which have a bad habit of eating cherries, ripe apples, pears, and grapes; some feeling it to be a great hardship that they are prohibited by law from shooting them even on their own premises.

There was a fine display of fruits and flowers, by the Sarnia Horticultural Society, in the hall just above the room in which the meeting was held. Among the apples were very fine samples of Alexander, Gravenstein, St. Lawrence, Porter, and other well known sorts, besides many that seemed to be peculiar to this section of country. In pears, the Flemish Beauty seemed to be the general favorite, judging from the number of dishes of this variety. The peaches were very fine showy samples. Plums were not as abundant as we expected to see them, but the samples were good. There were some very good bunches of Concord, Delaware, and other grapes. We noticed a plate of black grapes labeled "Seneca," but not having an opportunity of tasting them, can not say whether they were the same as the Hartford Prolific, as Downing seems to think, or not. The flowers were a very attractive feature. Some pots of dwarf bouquet Asters attracted much attention, from their uniquely beautiful appearance. The Dahlias were very fine, both in form and coloring. The Double Geraniums, Jewel, Marie Lemoine, and Andrew Henderson were remarkably well grown and in fine feather. A few well grown plants of Happy Thought were very much admired. The collection of Begonias, both of the Flowering and Rex sections, was very attractive. Among the Coleus were some showy specimens of the Shah and Cameleon, which set off the tables to good advantage.

The collection of fruit shown by James Dougall, of Windsor, was a marked feature of the exhibit. He displayed thirty-five varieties of French apples, grown on imported trees, besides his collection of American apples, pears, and plums, of which some were seedlings of his own raising, and all of which were remarkably well grown. His Belle Lucrative, Kingsessing, and Oswego Beurre pears were perfect models of size and beauty.

The committee on seedling fruits brought in their report, which was received and referred.

The report says of a seedling summer apple sent by Seth C. Wilson, of Whitby, though now past its season, that it is quite equal to the Early Harvest, and for the table superior; and that a Crab marked 260, raised by Townsend G. Vidal, Esq., of Sarnia, is fine, large, and handsome, and highly commended.

After passing a vote of thanks to the mayor and council of Sarnia for the use of their very commodious council chamber, and many expressions of thanks to the Sarnia members for their kind attentions and interest in the success of the Association, the meeting adjourned.

THE HENRIETTA RASPBERRY.

And still they come. How wonderfully prolific nature is, to be sure. Our readers will have hardly recovered from the effects of the account of that wonderful berry, the Pride of the Hudson, and taken a long breath after its perusal, and now, in the very next number, they are asked to read the story over again under a new heading. When raspberries take a notion to astonish the world, it is surprising what very wonderful feats they can perform. It seems as though there was a rivalry springing up in this matter between the States in the great republic on our southern border. New York has hardly inscribed on her banner, Pride of the Hudson, and nailed it to the mast, than staid old Connecticut, that land of steady habits, seems stirred to her very depths, and in the spirit of Heine, seized Norway's tallest fir, and dipping it in Ætna's crater, with the flaming brand writes on the forehead of the sky, "Henrietta."

This Henrietta is a wonderful creature, she too was never made, she "grewed." A chance seedling in the garden among the currant bushes sprang up in 1871. In 1873 this foundling performed such prodigies in the way of size of fruit and abundance of it, that it was taken in and cared for. Under improved treatment it improved, gratefully acknowledging the kind care it had received, and developed so many valuable qualities that it has been thought worthy of a name and an introduction to the public, both the fruit growing public, and that larger but less critical body public, the *fruges consumere nati*. We believe her foster parents held the levee in her honor sometime in the summer of 1877, and brought out the blushing beauty.

She seems to be a tall young lady, having reached to the height of nine and ten feet, with a girth of two inches and a quarter, and clothed with leaves of unusual size, many of them being five inches across. This foliage seems to remain through the hot and dry weather of July and August, when some of our red raspberries lose their leaves, and present the appearance of bare stems, with probably a small tuft at the top. It is said too, that notwithstanding this great vigor of growth it does not suffer from the cold; that during two winters, in both of which the mercury fell to twenty-four degrees below zero, it stood unprotected without losing even the tip of a cane, while the Philadelphia and Clarke, growing in the same field, were seriously injured. Only think of that, twenty-four below zero and not even a tip injured. That is just the kind of raspberry cane we want in our climate.

And now for the productiveness—does it bear well? Yes, tolerably well, considering its height. Let us try the rule of three. If a cane three feet high yields six hundred berries, how many ought a cane to bear that is nine feet high? Well, we are not told how high this cane was which produced over eight hundred berries, fully one half of which were over three-fourths of an inch, cross diameter, many of them one inch, and a few fully one and one-eighth of an inch. One single branch twenty inches long, produced three hundred and seventy-nine berries. What a pity the

plant could not be all branches?

But this variety also continues a long time in fruit, commencing to ripen about the first of July, and if we understand the matter correctly, continuing to yield ripe fruit up to the twenty-ninth of August. Now we do not approve of such a habit, it is a very bad one, and ought to be broken. Does Henrietta suppose we want her raspberries without end? Must we be asked to forego the blackberries altogether? Fie on your self-conceit, Henrietta; suppose you finish up by the first of August, and give us an opportunity to rest until another season.

In color the fruit is red, and is said to be of high flavor. We are not able to give Chas. Downing's opinion of its merits, he having only committed himself, so far as we know, to the remark that it "is a very promising new variety, with most magnificent foliage." This reminds one of the answer made by a non-committal bachelor, to the inquiry if he did not think a certain young lady just magnificent, who replied, "she has a most magnificent head of hair."

But a hardy raspberry, one that can endure twenty-four degrees below zero without flinching, that bears large crops of large red berries, of good flavor, is worthy of being tested by our fruit growers; and we therefore state that any who wish to give it a trial can procure plants of the gentlemen who first brought Henrietta out, by addressing G. H. & J. H. Hale, South Glastonbury, Hartford Co., Connecticut, U. S. A.

HOW SHALL I WINTER MY GERANIUMS, &c.?

Will you in your valuable periodical spare a corner to an anxious amateur, and say the best manner plants can be protected in winter, where there is neither greenhouse nor cold frames, and the space in the room very limited? The collection consists of Geraniums, Fuchsias, Abutilons, Heliotropes, and Coleuses.

The following method has been suggested for the geranium, which form the larger number of the plants, viz.: To take them up, shake the mould from the roots, dry them in the sun for a short time, place in paper bags, tie them up, and keep them free from frost; in spring place in a cold frame, water, and gradually prepare for out door culture.

If any one has tried this plan, will they oblige with the result of their experience.

A GOOD ROSE.

BY J. M. M^cAINSH, ST. MARYS.

I have just had the Marechal Neil Rose in bloom for the first time with me. The roses are of a deep canary yellow, large, well formed, double, and very fragrant. It well deserves the reputation of being the finest yellow rose in existence. It is too tender to withstand the severity of our winters unprotected, but can be grown as a pot plant, and wintered in a cellar or cold pit.

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.

[The end of *The Canadian Horticulturist Volume 01, No. 10* edited by D. W. Beadle]