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The Canadian Horticulturist.

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THE OAKS.

Perhaps it will be interesting to the readers of our monthly to refresh their memories, and take a glance once more at the rich profusion displayed in the many varieties of this most useful tree, probably the most useful of all the trees, when we take into consideration the various purposes to which it is applied.

We are indebted to the elder Michaux for the first history of our North American oaks, who under the auspices of the French government explored the Continent from Florida to Hudson's Bay, during the years from 1785 to 1796. Subsequently the younger Michaux in 1807 visited this Continent, and traversing the country, corrected and enlarged his father's work. Mr. Nuttall arrived the same year that the younger Michaux left, and in 1834 crossed the Rocky Mountains and extended these observations to Oregon and Upper California, which were published in 1849. From these sources mainly do we derive our knowledge of the several species of American oaks.

All the oaks are monecious, that is, the flowers are unisexual, the male or pollen-bearing organs appearing in one flower, and the female or pistillate organs in another, but both flowers—those that have the stamens and those bearing the pistil—being borne upon the same tree. Usually after fructification the female blossom advances through its several stages and perfects its fruit during the same season, but in some of the oaks this is not the case. The female flower seems to remain stationary during the whole of the first summer, and develops its fruit during the second season, so that there is an interval of some eighteen months between the first appearance of the flower and the ripening of the fruit. Botanists have made this peculiarity a basis of classification, and have arranged the oaks under two divisions, those of annual fructification, and those of biennial fructification. It is claimed as a matter of observation that those species which are of

annual fructification as a rule have wood of a finer texture, more compact, and therefore more durable than those that are biennial.

We shall not attempt even a short description of all the oaks that have been found in North America, but shall be content with naming those that are among our most useful trees, and deserving of special attention from all those who desire to make plantations of trees that will be valuable in coming years.

WHITE OAK, *quercus alba.* This is probably the most valuable of all, and bears a striking similarity to the European White Oak, *quercus sedunculata.* It will attain under favorable conditions to the height of eighty feet, with a diameter of from six to seven feet; but it varies very much in size according to soil and climate. The leaves of this species are regularly divided into oblong lobes, rounded at the extremity, not pointed. When young they are reddish above and white and downy beneath, and when full grown they are smooth, the color light green on the upper surface and glaucous underneath. In the autumn the leaves change to a bright violet. The acorns are oval, large and sweet, set in rough, shallow, grayish cups, and borne either singly or in pairs. This species belongs to the division of annual fructification, hence the acorns will always be found upon the shoots of the current season. The wood is reddish, and similar to that of the European, and is used for building-frames, mill-dams, posts, frames of coaches, baskets, barrels, and ship-building. Mr. Nuttall says that the roots of this species make beautiful furniture, and that a cabinet and table made from the forked branches, which was then in the possession of Mr. C. J. Wister, in Germantown, near Philadelphia, would vie with the finest known woods, being feathered in the most beautiful manner, and taking a polish equal to that of the finest mahogany.

ROCK CHESTNUT OAK, *quercus pinus monticola.* This species delights in strong soils in abrupt and untillable exposures, and on that account is well adapted for clothing broken hill-sides, and rocky or stony soils. It is found growing on the steep, rocky banks of the Hudson River, and on the shores of Lake Champlain, and yet more abundantly on the Alleghany Mountains in Pennsylvania.

The tree presents a beautiful appearance, being symmetrical in form and luxuriant in foliage. The leaves are five inches long and three broad, oval in form and regularly toothed. When they first open they are covered with a thick down, but when fully expanded are perfectly

smooth. The acorns are brown, oblong-oval, set one-third of their length in a spreading cup covered with loose scales. The bark is used in tanning; the wood is reddish, like that of the White Oak; is used in ship-building, and for fuel is esteemed next to the hickory, and is the best of all our oaks for this purpose. It is one of the annual fructification species.

Red Oak, *quercus rubra.* This species belongs to the biennial section, and is found as far north as the Saskatchewan, and is one of the most common in Canada. It is a tall, wide-spreading tree, often attaining a height of eighty feet, with a diameter of from three to four feet. The leaves are smooth, shining on both sides, large, deeply laciniated, and rounded at the base. In autumn they change to a dull red, afterwards becoming yellow as they fall. The acorns are large, contained in flat cups covered with narrow scales. The wood is reddish, coarse grained, strong, but not durable, and is principally used for staves. The bark is used in tanning, but is not as highly esteemed as that of the Rock Chestnut and Black Oak.

Black Oak, *quercus tinctoria.* This species is not only widely distributed, but is very abundant. It is one of our loftiest trees, rising to the height of eighty or ninety feet, and measuring four or five feet in diameter. The leaves are large, deeply laciniated, and divided into four or five lobes. The leaves of the young trees change in autumn to a dull red, while those of the old trees become yellow. The trunk is covered with a deeply furrowed bark, which is black or very dark brown, whence it probably derives its name of Black Oak. The wood is reddish and coarse grained, and is used largely for staves, or as a substitute for white oak for other purposes. From the cellular tissue of this oak is obtained the material known as *quercitron,* used in dyeing wool; silk and paper hangings. This is probably the most valuable of those oaks which belong to the section of biennial fructification, and only second to the white oak.

SWINDLING TREE AGENTS.

BY D. B. HOOVER, ALMIRA.

Several years ago we were greatly pestered in this section with a lot of swindling tree agents. They roamed through the country pulling the wool over the eyes of a good many young farmers, who had about

that time taken up the idea that the growing of fruit would be profitable if good kinds were procured. This gave the agents an opportunity for selling anything for which a grand name could be furnished—a thing that they were not slow to observe and profit by. Anything asked for would at once be placed on the order book, whether they had it in stock or not. Then they invariably had some novelty to exhibit, that "surpasses anything heretofore offered." One agent took orders for what he termed the Mammoth California Pear, at $2.00 per tree, but when the trees he furnished us came into bearing they proved to be the Duchesse d'Angouleme, worth about 50 cts. Many other instances of fraud perpetrated by these agents might be recalled, but the above will serve as a fair sample.

Although all tree agents are not alike unreliable, still, as a rule, would it not be much better for us to stop dealing with agents altogether? When we require anything in the nursery line, let us place our orders direct with some well-known and reliable nurseryman, so that we may be assured that we get just what we order, and nothing else. This would ultimately do away with agents entirely, consequently the nurserymen, by saving their salary or commission, would be enabled to furnish stock at cheaper rates.

ORNAMENTAL TREES.

At a meeting of the New York Rural Club, Mr. Josiah Hoopes, president of the Pennsylvania Horticultural Society, read a lengthy and excellent paper on ornamental tree planting, from which the following brief extracts are taken. The Editor of the CANADIAN HORTICULTURIST commends them most earnestly to the careful perusal of every gentleman who plants ornamental trees. It will be necessary to modify these very valuable suggestions sometimes so that they will harmonise with the climate at the place where the planting is to be done. In that part of Ontario lying between the great lakes, Erie and Ontario, and along the shore of Lake Erie up to the line of the Great Western Railway, within the limits of successful peach culture, the trees and shrubs mentioned by Mr. Hoopes will be generally found to thrive well, but to the northward, in limits where the peach will not thrive, we can hardly expect the Aucuba or the Japanese Euonymus will flourish; nor can the Magnolias be relied upon. Some of the

more hardy species are being tried in the Arboretum at the Ontario School of Agriculture, Guelph, but a few years must elapse before any report upon their ability to endure the climate can be made. The same remarks may also be made concerning the Cypress, both deciduous and weeping. The hardiness of the new evergreens mentioned by Mr. Hoopes is not yet established in our climate. The Balsam Fir, Norway Spruce, Austrian, Scotch and White Pines have been fully proven, and can be relied upon everywhere. The beautiful Lawson Cypress is not hardy enough for the climate of the County of Lincoln, but we may hope that the Nootka Sound Cypress, *C. Nutkaensis*, will prove hardy. But the greater part of the plants named by him are hardy, and where they are not, there are species of the same genus in almost every case, well suited to our climate. With a little attention to the subject, as suggested by Mr. Hoopes, the autumn tints might be made a most pleasing feature of our lawns. Will not our readers plant a group or two of these trees and shrubs in their lawns, and show their neighbors what a beautiful autumn picture can be made. Mr. Hoopes says:—

I invariably commence with a stereotyped phrase, "Don't plant large trees in small yards." One of the greatest of all errors, and one that is indulged in by so many of our planters in their horticultural infancy, is that of setting out a first-class tree in a second-class yard. Scarcely a town lot or cemetry enclosure is laid out but this mistake is made, although ignorance in nearly every instance is the excuse, and justly so, too. Taking, for instance the laborer's cottage, with its few square feet of grass in front,—and, by the way, what is more attractive than a well kept sod?—in the place of a Norway spruce or Austrian pine, I would suggest what is termed a dwarf evergreen—one of the smaller forms of *arbor vitæ*, now becoming so popular, or a juniper, with its variety of outline, or perhaps a form of the newer genus *Retinispora*. If the front should have a northern aspect, the best plant for this purpose is either some handsomely variegated variety of *Aucuba* or *Euonymus Japonica*. The newer introductions of these are exceedingly attractive, and a group composed of distinct kinds forms an agreeable feature. To those whose taste for flowers is predominant, I would recommend a circular bed of roses, not planted promiscuously, but in lines or ribbons, each circle a distinct color, all trimmed low, and consequently well branched. If the entire bed

should be of one variety, the effect will also be very fine. For this purpose the China or Bengal class cannot be excelled.

As I am not here to-night to give you a lesson upon landscape gardening, even had I the ability so to do, I shall simply call your attention to a few of the most desirable trees for what might be termed second-class places. For a group of low-growing trees, commend to me always certain species of the Magnolia. The *M. conspicua*, with pure white bloom; *M. soulangeana*, with its white flower, striped and shaded with purple; *M. cordata*, with golden yellow, odorous bloom; and lastly, but very far from least, the beautiful *M. Thompsoniana*, with creamy white fragrant flowers. We have here a group of four trees that cannot be excelled—hardy, beautiful—in foliage and flower, and so entirely free from injurious insects that they seem to combine all the excellencies one could desire.

Another pretty group of small-sized trees may be composed of the *Halesia tetraptera*, (or Silver Bell,) *Laburnum*, (or Golden Chain,) and the *Cercis Canadensis*, (Red Bud or Judas tree.) Still another group of the same size can be formed of the *Prunus Padus*, (or European Bird Cherry,) *Rhus cotinus*, (or Purple Mist,) *Chionanthus Virginica*, (or White Wood or Virgilia.)

In a corner of the grounds a closely massed group of the different colored double flowering peaches will be very pleasing when in bloom, and where they will succeed, nothing can excel the numerous varieties of thorns. In the centre of the peaches I would insert a tree of Reid's weeping variety, a graceful drooping tree, and among the thorns plant the weeping variety of it. These have a tendency to remove a certain uniformity of outline prevalent in all such masses.

As we leave the small class of trees and advance to those of larger growth, I unhesitatingly place in the front rank, if not at the very head, the Norway Maple. Seldom do we find its equal in all that pertains to a specimen tree. With ample foliage of the richest shade of green, globular in form, perfectly hardy and healthy in almost every situation, it appears peculiarly adapted to stand alone upon a beautiful lawn. Another, although of a widely different character, is the White Birch, (*Betula alba*,) and its delicate cut-leaved variety. The silver-leaved Linden succeeds well everywhere, and is undeniably a beautiful specimen tree, as well as the English cork-barked maple, when branched to the ground. Although of large size, the Sweet Gum, (Liquid amber)

forms one of the most available ornamental trees. Beautiful at all seasons. with its curious corky bark, rich, glossy star-shaped leaves and picturesque form, it is well adapted for creating marked effects; and then in the autumn its brilliant crimson hue is remarkably attractive. Either for grouping or as single specimens, the genus *Fagus* or Beech supplies us with a charming set of trees. Among the most striking in character I would place the fern-leaved and purple-leaved as especially fine. The cut-leaved Alder and the newer variety *asplenifolia* I consider very desirable for particular localities.

There are very many other trees of beautiful form that are unfortunately not adapted for general planting. In the neighborhood of Philadelphia we cannot use the elms, because the leaves are often perforated by insects; nor the ash, on account of the borers; the mountain ash meets with the same fate, and the thorns are destroyed by a fungus; the horse chestnuts become disfigured by midsummer, and so we have to rely on other trees. But where this list will succeed, as they evidently do in central New York, my advice is to use them all freely. There are four genera belonging to the great natural order *Coniferæ*, that are furnished with deciduous leaves and tall spiral tops, all well adapted for the centre or background of groups —the Larch family, of which the European species is preferable; the *Salisburia*, or Japan Ginko, with curious yet pretty fan-shaped foliage; the *Deciduous Cypress*, with light feathery leaves; and the *Glyptostrobus*, or Weeping Cypress, having unusually graceful foliage and pendent branchlets. Every place should have at least one drooping tree, as much for its intrinsic beauty as for the effect it produces when grown near other forms. For this purpose the Weeping Beech possesses an individuality peculiarly its own. Not so pretentious perhaps as the preceding, but with a graceful drooping of the more slender branches, the Weeping Linden stands next in the list. Where they will flourish, the Weeping Elms and Weeping Mountain Ash are very handsome; and the old fashioned Weeping Willow, especially when in the vicinity of water, is often a valuable assistant for creating a beautiful picture.

For small-sized weepers I would suggest the following, all of which are useful, and in fact indispensable to the landscape gardener: The thorn, grandidentata poplar, Kilmarnock willow, dwarf cherry, sophora and beech. The drooping varieties of the common ash are stiff and

formal in outline, yet often attractive from their very oddity. A feature very often overlooked in American gardens is the massing of trees that are beautiful in the autumn. Most places can be improved by a little group of these brightly-tinted species, and for this purpose I would name for the back-ground the scarlet oak (*Quercus coccinea,*) dazzling in its scarlet dress; the sour gum (*Nyssa Multiflora*), with the deepest shade of crimson; the red maple (*Acer rubrum*), gay with yellow, red and orange, and a sassafras (*S. officinale*), with golden yellow leaves. To the front I would place a white flowering dogwood (*Cornus Florida,*) with its vivid shade of red; one or two common sumacs (*Rhus glabra*), as bright as the petals of a crimson peony, with a few vines of the green brier (*smilax rotundifolia*), of golden hue, and *ampelopsis quinquefolia,* dyed with crimson, clambering over the whole. It is needless to add that the effect of such a blending of colors cannot be overrated. In leaving the deciduous trees, I would merely call your attention to the neglected family of oaks, although beyond the limits of such places as we are discussing to-night. For very large lawns no genus in the flora of the world can exceed their majesty of form, their picturesqueness of outline, nor their value for every purpose appertaining to the landscape art.

We now arrive at the Evergreens, but as my time has nearly expired, I will hurriedly particularize a few of the most valuable for the majority of our country places, all of which will undoubtedly succeed in this vicinity. In the spruce family, as not only the first in the genus, but among all cone-bearing trees, the Norway Spruce is fully intitled to consideration before any other. You all know it well, and knowing it have nothing to say against it. It is a tree at once appropriate in all situations and for every purpose; hardy everywhere, and exceptionally beautiful.

More formal in outline, but remarkably pleasing in color, the white spruce stands next, and the hemlock, with its charming drooping branches, curving in even circles to the ground, must never be neglected. In particular localities and exposures, the *Abies Smithiana*, *A. Douglasii,* and *A. Menziesii* are among our handsome kinds. In silver firs, the *A. Nordmanniana* is without doubt the best hardy species known to us at present—always beautiful and healthy, we cannot well dispense with its presence. Almost as valuable, the *A. Pichta* ranks next. With varying success, although generally firm,

I would name the rare *A. amabilis, A. grandis, A. nobilis,* and *A. Cephalonica,* while common balsam fir and European silver fir are unexceptionable in many grounds. The pines must be used sparingly, as they are rather coarse for close proximity to the dwelling. Among well-tested kinds, the Austrian, Cembrian, White, Lambert's, and Scotch are all hardy and deservedly admired, and where the *P. excelsa* is free from blight, I would add it to the list. A few of the newer species, such as *P. ponderosa* and *P. Massoniana* are promising to be valuable, but they require a more extended trial. The Cedar of Lebanon must not be forgotten, not alone for the many reminiscences connected with it by the sacred writers, but for its individual beauty on the lawn. The *Libocedrus decurrens, Cupressus Lawsoniana,* and *C. Nutkaensis,* notwithstanding they are almost unknown to cultivators, are supassing our most sanguine expectations where they have been tested. Our American *Arbor Vitæ,* as well as the Siberian variety, are so well known and appreciated that it seems unnecessary to urge their claim to public notice. Low-growing conifers are of such vast importance to the landscape gardener in creating dense evergreen masses, that of later years our arboriculturists have been eagerly gathering from every available source, all which have proven distinct.

PLANTS TO BE DISTRIBUTED AS PREMIUMS IN SPRING OF 1882.

The Directors have decided to give the members the privilege of selecting from the following articles that one which they prefer to have sent them next spring; namely, 1st, a plant of the Spirea prunifolia, or, 2nd, a plant of Lee's Prolific Black Currant, or, 3rd, three bulbs of the Gladiolus, or, 4th, a Moore's Early grape-vine. The members, when they send in their annual membership fee, will please signify to the Secretary which of the four is their choice.

The *Spirea prunifolia* is one of our most handsome flowering shrubs. It is remarkably free from insects, healthy and hardy, never becoming very large, and easily kept in any desired form. The leaves in summer are a rich glossy green, but in autumn they change to various tints of crimson and scarlet, making a very attractive and pleasing object on the lawn. In early spring, before the leaves are expanded,

the branches are literally wreathed with white double flowers, most perfect in form, and beautiful in their whiteness. Any of our members desiring an elegantly neat flowering shrub for the lawn cannot fail to be pleased with this.

Lee's Prolific Currant is one of the best, if not the best, of all the black currants. The currants are large in size, and borne in profuse clusters of the usual form.

Three *Gladiolus*. These are strictly flowering corms, though usually called bulbs. They are very showy late flowering plants, the flowers being prettily shaded with crimson, or pink, or carmine; these are borne on long spikes, those nearest the base opening first, progressing upwards until all are expanded. The spikes of bloom are much used for table decoration, because they can be cut when the blooms at the base have expanded, and put in water in the house where the remaining flowers will gradually open until all have bloomed. The corms should be kept in a cool place free from frost during winter, and not planted in the garden until danger from frosts has passed; then they may be planted in the open border, where they should remain until frosty weather in the fall admonishes us to take them up, and store them away for the winter. They can be kept where potatoes are stored, or any cool place where it does not freeze. Three of these corms will be sent to any one choosing the Gladiolus.

Moore's Early Grape. This is the best very early black grape. In size of bunch and berry it resembles the Concord, and is much like it in flavor. Of all the many varieties fruiting in the Editor's grounds this is the first to ripen, and is much better than Champion or Hartford Prolific. The vine is remarkably healthy and hardy, with tough leathery foliage, ripening its wood very early in the season, which qualities make it remarkably well suited to our climate. It is a variety well worthy of trial, especially by the members who reside in those parts of the Province where the summers are short, and the season not long enough to ripen the Concord fully every year. They will find it a most desirable acquisition.

Each member will receive the article chosen by him through the mail, securely packed in damp moss and wrapped in oiled paper. The Directors have found that this is the only way in which plants can be distributed with certainty and dispatch.

CORRESPONDENCE.

ROTTING OF TOMATOES.

Will you or some of your correspondents inform the readers of the HORTICULTURIST what caused the rot in tomatoes this year and last. In this section more than half the crop was thus destroyed. Is it caused by insects, or is it atmospheric? I see by the papers that the disease, or whatever it may be called, is not an endemic, but an epidemic, extending over a large area in Ontario. It has proved the most destructive where planted on rich land. Before the fruit has attained its full size it begins at the flower end with a black spot, a kind of gangrene, and spreads very rapidly, making the fruit useless.

Can a peach tree be successfully grown by grafting on a plum stock? Will it be as hardy, and stand the winter's frost, and bear fruit, or will it be sterile? Hoping to see an answer to these queries in your next issue,

I am, dear sir, yours, &c. THOS. COATES.

The peach is often budded on plum stocks, and is fully as hardy and productive as when grown on the peach stock. The Editor has not any experience in the rotting of tomatoes. Can any of our readers answer?

DEAR SIR:—I send herewith one dollar to renew my subscription. I consider the HORTICULTURIST well worth the money, and look out for it every month with great interest. Saunders' Hybrid Raspberry did well. It made five or six canes of about five feet each in length. I use a liquid manure prepared from the parings of horses' hoofs steeped in water for a week before using. When the liquid is drained off add more water. In this way a bushel of parings to a barrel of water will produce an abundance of manure for vines, small fruits and plants for six months. I used it with good success. This manure is excellent for plants in pots, but is objectionable on account of the smell it produces in a house. I think that a solution of copperas sparingly used would cure the smell; and I learn that fuchsias are very fond of copperas.—JAMES STEPHEN, *Toronto.*

The Downing gooseberry and Salem grape both did well with me The Swayze Pomme Grise apple tree was as dry as an old stick when received; couldn't bring life into it. Flemish Beauty pear did well. The Glass Seedling Plum I did not get until the plum blossoms had all fallen off my trees. It was well packed, and several shoots had made a growth of three or four inches long, the shoots quite white. I nursed it very carefully, but it did not do well. Had it planted in a nursery row with others, and the deep snow of '78 and '79 broke it off close to the ground, so that was the last of it. The Diadem Raspberry did pretty well, but in moving from the town to my farm it got lost by some means. The strawberries were not of much account. The Burnet grape did well. The Ontario apple was a splendid tree, received in good condition, and has made great growth. Saunders' raspberries did very well, especially No. 50.—WALTER HICK, *Goderich.*

I am glad to find that the Directors have decided to distribute among the members a grape vine. My garden being of very limited dimensions, I have to make the most of it. I should therefore prefer a vine for 1882, and if allowed a choice, would like to try a plant of the Niagara grape, or failing that, one of the Prentiss. The CANADIAN HORTICULTURIST has been a source of profit and pleasure to me, and I sincerely hope the Directors will continue its publication. As regards the trees, &c., received from the Association, I have to report that Glass' Seedling Plum bore a sprinkling of nice, handsome fruit, after the style of the Orleans, but darker in color. My crop of fruit was very much lessened by the loss of nearly all the fruit buds, pecked out by the sparrows in the early part of the year. I hope to circumvent master impudence next season, by coating the buds with a composition distasteful to the birds, whilst beneficial to the tree. I cannot say much for the Diadem raspberry. It is very hardy and vigorous, but the fruit on my soil (stiff clay) is small and ill shaped; quite the reverse to the strawberry Arnold's Pride, No. 23. I can speak in the highest terms of this berry, which I find very productive, vigorous, of good flavor and perfectly hardy, many of the plants having been left uncovered during the last winter and came out in the spring uninjured. The Burnet grape produced a crop of between thirty and forty bunches of very nice fruit. I find the vine quite hardy, remaining uncovered during the winter. I nearly lost this vine when first received from the nurseries. For over a month it made no progress, and was evidently dying. Fancying something was wrong at the roots I dug it up and carefully washed the roots in warm soap-suds, then replanted, and daily sponged the stem, &c., until I had the pleasure of seeing my trouble rewarded by its breaking into bud from just beneath the soil. Since then it has made shoots twelve feet long, well set with fine prominent fruit buds. I had a similar trouble with the Ontario apple tree, which when received appeared dried up almost to a stick. I placed it in a barrel of rain water for a day, then after taking off two scions, (both of which I grafted and they grew,) I planted, and every evening washed the stem and branches with sun-warmed water. It grew and is now a promising tree, with several well-developed fruit spurs. So you see, Mr. Editor, that with a little care and trouble I had the satisfaction of saving both plants. Whereas, had I treated them as most of my neighbors do, by simply digging a hole and thrusting in the roots, and then leaving them to take care of themselves, I should very likely have lost both.—WM. J. MANSELL.

The strawberry plants were all killed off the first winter. The raspberries have done very well, the fruit being firm and pleasant, and the canes perfectly hardy, standing all winter without any protection. The Ontario apple promises to make a fine tree. I am cutting the head well back, keeping it low, as it is planted on a high piece of ground, and is exposed to every wind that blows. I leave the Burnet grape vine to the last, and will try to give it its just due. I consider it one of the best out-door grapes yet introduced. It is perfectly hardy, as it is left tied upon the trellis all winter without any protection. It is a strong, vigorous grower, giving as much labor to keep it pinched back as Rogers No. 15, which is planted

alongside. It is a very prolific bearer, all the bearing parts of the canes being covered with fine bunches of large oblong berries, the flavor of which is A 1. Sharp, sweet, and spicy ; far ahead of the other standard varieties I have. Some practical men who have tasted it, say it is equal to the Black Hamburg, which I believe is one of its parents. It is a fine keeper ; at Christmas the bunches were as plump and fresh as when cut from the vines, and the flavor as good as when fresh. The first year it bore fruit it was ripe a week or ten days before the Concord ; this year it ripened with the Concord, being very much troubled with the thrip, which no doubt retarded its ripening. It reflects credit on the Association for introducing it, and on Mr. Dempsey as the originator. My soil is heavy clay, underdrained, and owing to the exposed situation I trim and trellis my vines low, keeping them well pruned back.—THOS. HEDLEY.

REPORT ON BURNET GRAPE.

The Burnet grape vine I received from the Association has grown very strong. It bore twelve large bunches of good flavored fruit this season. Soil, heavy clay ; southern aspect, against concrete wall.

—W. WISE, *Clinton.*

BURNET GRAPE.

The Burnet Grape had several fine bunches of grapes on it last year. It fruits nicely down here, and stands the weather well.

D. V. BEACOCK, *Brockville.*

Last year was a terror here. All my plum and peach trees are dead, and about 1,000 pear trees are gone, and the rest are sickly looking. Apple trees are also dying, especially R. I. Greening. I lost about 2,000 trees, 8, 9, 10, 11, and 12 years old.—W. MCKENZIE ROSS, *Chatham.*

Antioch College, Yellowsprings, Ohio.

Will you allow me to make a few remarks on Mr. Saunders' paper. In speaking of the codlin moth, (*Carpocapsa pomonella*), he says that no one to his knowledge has ever taken it at sugar. Now it is a little singular that this year, when the codlin moth is much scarcer than usual, two specimens out of the three that I have seen were caught at sugar in a dish hung on my apple tree. I am inclined to attribute the scarcity of the insect this year to our cold winter and the continuance of snow on the ground, which has driven the woodpecker to search more closely for food. The second point I wish to notice is probably an effect of climate, but here the egg of the moth is not laid until some time after the blossom of the apple is over. My trees were in full flower during the first week in May. I took the first codlin moth on June 2nd, and then on June 13th. On this latter day I saw the first signs of their presence in the fruit. Careful search had previously failed to detect them. Then nearly six weeks passed between the fall of the blossom and the hatching of the caterpillar.

E. W. CLAYPOLE.

REPORT ON FRUITS.

I have two Wagener apple trees, which I planted on clay soil twenty four years ago; but they do not grow as fast as some other kinds. They are good trees to bear, however; the fruit is of fair size, keeping till May. I think they are one of the best varieties of winter apples we have. Grimes' Golden Pippin is growing well; the fruit is of good size and superior flavor. They are ripe in November; a good many fall off before they are fully ripe. They are not likely to be very valuable in this section.

My Burnet grape bore a few small bunches last summer. The berries are not as large as the Concord, and did not ripen any earlier.

SANDFORD WHITE, *Tilsonburg.*

CHOICE SHRUBS.

THE MOONSEED.—Few realize the attractions of the Moonseed, *Menispermum canadense*, but why I cannot say. It is hardy and should be well known, for it is an old plant of excellent qualities. The way in which the vigorous, broad, heart-shaped leaves fold closely over each other is very curious as well as ornamental. It is, moreover, a very strong grower, easily propagated, and therefore cheap. It is, however, only another instance of a good old plant apparently doomed to neglect.

THE CUT-LEAVED SUMACH.—The changing colors of autumn again remind us of the peculiar attractions of the cut-leaved sumach (*Rhus glabra laciniata*). Many roadsides glow at this season with the common sumach, but the same deep color on the cut-leaved variety is combined with the most delicate and lace-like divisions of the leaf. The very irregularity of the sumach has such special charms that pruning fails to improve even the cut-leaved variety, unless it be to curtail the dimensions of some overgrown specimen. All the sumachs—*R. glabra laciniata*, as well as the beautiful new Chinese *R. osbecki*—belong to the outskirts or points of large shrub groups, where their peculiar form and coloring may be fully evident. Color and irregular form alike make them prominent in such positions. If it is desirable to form them into masses—and it is often very desirable—they should be planted entirely by themselves on some hillside or slope. The way they are gathered together in their favorite haunts suggests the proper manner of arranging them. It is a mistake, however, to think that any soil will suit the different varieties of sumach simply because when wild they grow freely and abundantly. They like good, loamy soil, and certainly in all ways deserve to have their likings considered, for as lawn plants in the fall of the year few shrubs excel them.—S. PARSONS, in *Country Gent.*

A FEW WORDS ABOUT THE CLEMATIS.

It is hardly fair to give so lovely a plant as the Clematis a mere passing mention. The tender, faint, silvery white of *C. Lucy Lemoine*, the broad gleaming white of *C. Gloire de St. Julienne* and *Henryii*, and the rich royal purple of *C. Thomas Moore, Prince of Wales, patens* or *azurea*, and *Jackmanni*, the latter almost the best of all, come to us as a surprise; almost a miracle as we first behold their tender petals resting on masses of shining

leaves. But I want to note two or three important points in their culture, whereby increased and prolonged pleasure may be derived from their peculiar beauty. Clematises, as a rule, grow thick and low, when compared with other climbers. They should, therefore, be trained either to coarse wire netting, set against wall or house, or on a pole or dead tree with parts of the branches left unlopped. Thus managed, clematises display effectively their rich colors and delicate grace. Single wires or strings fastened vertically are frequently used as supports for clematis vines, but such a system of training fails to display satisfactorily the peculiar beauty of the leaves.

But some one may say that clematises, with all their surprising beauty, are very unsatisfactory because they last so short a time. The answer to this is—cut off your clematises just below the flowers, as soon as they have faded, and you will find to your delight that in August and September all kinds in any way related to those mentioned above will bloom freely a second time. Do not forget, farthermore, the species *C. virginica*, small, white and sweet-scented. It is not related to the above list, but is induced to bloom in a like manner a second time by similar pruning. People are becoming very enthusiastic about clematises now-a-days, but they have yet to learn half the attractive ways by which their charms may be displayed. For instance, they may be trained into a thick carpet, sprinkled with flowers, or in the form of a border. They may be made to cluster deliciously in the upper curves of a gothic doorway or window, or they may be allowed to wander in wild graceful abandon over heaps of rocks or roots; indeed, I can never fancy the distinctly formal mounds, columns and what-not of clematis that the books recommend in their latest devised systems of training. Very useful clematises for creeping over rocks and roots are the species *C. apafolia* and *C. grahamii*, one yellow, the other white, and both possessed of the habit—almost peculiar to themselves—of blooming in August in the most profuse fashion, and therefore needing no summer pruning. These clematises grow very rapidly and thickly, and are in every way unsurpassed for covering rock-work with foliage and flowers.

A rare and most curious clematis has come recently into the hands of the planter under the name of *Clematis coccinea*. The flower is unlike the ordinary form of clematis, and it is not only curious, but very beautiful. It consists of a solid, fleshy mass less than two inches long, moulded into the similitude of a diminutive antique vase with a very small mouth. The color is deep scarlet, which flushes the entire surface of the flower, while the foliage is much like that of an ordinary clematis. It blooms commonly in July. Altogether it is one of the most interesting plants I have seen in a long time, even setting aside its unquestionable rarity. Surely I am doing no plant injustice when I express regret that such gems of hardy nature receive so little attention compared with that bestowed on the different forms of coleus and geranium. Furthermore, in thus speaking of clematis coccinea, I would offer the same plea for all clematises. They are in many instances difficult to propagate, but always choice and lovely, and very frequently rare.—S. PARSONS, Jr., in *Country Gentleman*.

SELECT FUCHSIAS.

Fuchsias are among the prettiest of our soft wooded, free-blooming plants. They are of the easiest culture, requiring during the summer a partially shaded position, with moderately enriched soil and plenty of water during their season of growth. Some of the varieties are also well adapted for bedding purposes. Such varieties as possess good habit and good vigorous growth, and also free blooming qualities, are the most suitable for this purpose. I give below the best of a large collection, including all the newer kinds recently introduced:

Avalanche (Smiths).—Of a straggling growth, the flowers are of the largest size, double, corolla white.

Avalanche (Henderson's).—The habit of this variety is neat and compact, although a strong grower; the foliage is of light yellow, the flowers very large, the sepals crimson, corolla purple. In the western cities this kind is grown more extensively for retailing than is any other. Its habit of blooming when quite small makes it suitable for this purpose. It is without doubt the best dark double fuchsia, all qualities considered, in cultivation.

Black Prince.—A distinct variety; tubes and sepals a waxy carmine; pale pink corolla, margined with rose.

Elm City.—An old double fuchsia of good habit; tube and sepals bright scarlet; corolla crimson.

Queen of Whites.—Tube and sepals bright red; pure white single corolla; good habit.

Lord Byron.—One of the finest dark single fuchsias of recent introduction, having a fine branching habit, blooming when quite small; tube and sepals bright crimson; corolla large, open; of the darkest purple, almost black.

Mrs. H. Cannell.—Considerable excitement has been manifested among horticulturists on both sides of the Atlantic regarding the merits of this fuchsia. It is undoubtedly one of the finest double white varieties yet introduced. The flowers are of large size, and are produced in great abundance on well-shaped plants.

Sunray.—Some plants of this fuchsia in our greenhouses just now have leaves of the finest markings, and of the richest colors, equalling the finest tricolor geraniums, and not much inferior to the fine-leafed caladiums. The flowers have scarlet sepals with purple corollas.

Warrior Queen.—A good single, crimson sepals, corolla violet.

The following are the best winter-blooming kinds:—

Speciosa.—Sepals flesh-colored; corolla scarlet.

Mrs. Marshall.—Pure white tube and sepals; rosy-pink corolla.

Bianca marginata.—The sepals of this one are white, corolla crimson.

Earl of Beaconsfield.—Of recent introduction, but an excellent one for winter blooming. The blooms are often over three inches long, the tube and sepals a light rosy carmine, corolla a deeper carmine. A splendid flower for keeping a long time after being cut, being of fine substance. The double-flowering kinds are not very suitable for winter blooming, but can be had to bloom early in the spring by propagating early in the fall, and growing on slowly during winter.—M. MILTON, in *Country Gentleman.*