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A Practical Treatise

—ON—

PLUM ☉ GROWING,

—BY—

≡ ELIPHAS COPE. ≡





# A Practical Treatise

ON

## Plum Growing,

BY

ELIPHAS COPE,

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— Rogers, Ohio. —



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NEW LISBON, OHIO:  
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1888:

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## Index.

|   |    |
|---|----|
| Situation, . . . . .                                      | 1  |
| Soil, - - - - -   | 3  |
| Varieties, - - - - -                                      | 5  |
| Planting Time, - - - - -                                  | 11 |
| Care for the First Three Years, - - -                     | 13 |
| Subsequent Care, - - - - -                                | 16 |
| The Curculio, - - - - -                                   | 20 |
| How to Plant and Care for a Few Trees,                    | 25 |
| How to Care for an Orchard in Fruiting<br>Time, - - - - - | 27 |
| Plum Rot, - - - - -                                       | 31 |
| Black Knot, - - - - -                                     | 36 |
| The Borer, - - - - -                                      | 39 |
| Varieties Further Considered, . . -                       | 41 |

## Preface.

MY EXCUSE for presenting this little volume at this time is the want on the part of many who have plum trees and have not the time nor inclination to enter into an extensive study of the obstacles in the way of plum growing, of a book simple to the planter and low in price. Avoiding professional work, yet indicating our manner of labor and care so fully that we believe it will enable those who have plum trees, or who contemplate planting, to be successful if they will follow the rules laid down herein.

ELIPHAS COPE,

Plum Grower,

ROGERS, OHIO.

## PLUM \* TREES.

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### THE SITUATION.

**A**S AGAINST the practice which we were formerly taught, that fruit trees should be planted in sheltered places, the experimental evidence is most conclusively to the contrary. Our fruit trees should be planted in exposed places, and our care for them should be such that they may be well set and permanent in their places, and by this means, besides other advantages which can be named, we escape the insects which have sought the shelter, and the still, hot atmosphere thereabouts. We do not mean by exposed places, that trees should not be protected from the ravages of stock, or anything that would in any way injure the tree, but that we give preference to setting trees on the higher ground where the air most freely cir-

culates, or where the woods or many trees will not hinder the free moving of the air.

Level ground may be said to be the most convenient and best situation for fruit trees. A southern slope is better than a northern hillside if the tree has proper care. Otherwise, if the tree is left to care for itself, then the north hillside is the better. As a rule, we prefer to plant on an eastern slope, or hillside, than to the west. And this rule will hold good except in case of a cove or a shelter from woods, or anything which tends to hinder the favorable circulation of the air. By experience we conclude that trees so sheltered make trees in an undue time, and out of proportions; are not so hardy, will not live so long, and are very much more troubled with insect life.

## SOIL.

THE soil has very much to do in a regular and annual crop of fruit. That which underlies the soil already worked, may be of such nature that although the tree is cared for, yet in a dry season, or in the dry part of the season, the moisture will not raise in it. For instance, a soil of 7 to 10 inches covering a slate or hard pan of any kind, may with good care yield a crop of fruit every other year and live a long time, while a clay soil of some feet in depth will with the same care make an annual yield. A soil in which the moisture will raise is a soil which the roots will penetrate. And if it be a natural strata like the clay into which the roots can go deep, we may in this expect to get a satisfaction in planting provided the roots are not robbed by some other plant, or the branches deprived of the wind and the sun.

We have grown splendid crops of plums on high level ground, and upon all hillsides, and upon clay ground, upon slate, upon fire-clay, upon soapstone, upon lime, upon sand and upon wash. But we have not received

annual crops from any only those grown on deep, heavy clay. The trees here are permanent medium size of regular growth, and a fair specimen of fruit.



## VARIETIES.

THE plum the same as other kinds of fruit shows many varieties, with marked differences in like kinds. Of the Damson, we have the small size and large size, and the early and late varieties. We regard the early Damson plum as unprofitable. They are not as good in quality, neither will they command as high a price as the ones ripening after the time of frost. The small blue Damson plum which ripens late in the fall, will, because of their richness, always be in demand. We believe the late blue Damson plums will give satisfaction with proper care, and that they should not be greedily picked off, as is the case too much, until they are fully matured.

The Shopshire Damson is of fine size, ripens late, and is a most excellent fruit, and the only hardy Damson plum for field culture. It unites readily on peach stock on which it appears so far to do well.

There is no plum that has yet proven so generally successful as the Lombard plum. Perhaps it is because they set such an enor-

mous quantity of fruit. And further, because when the curculio begins on a tree they want to take it; that this variety is found fruiting. Because when a Lombard tree under certain circumstances has set only about what it could handily ripen, they are no more spared than other kinds. If the Lombard plum tree is properly cared for in fruiting time, about three weeks after the plums are set, they will cast perhaps the half of their fruit to the ground, which saves thinning of fruit. This variety is much more subject to the Black Knot than most varieties. Nearly as much so as are the Damsons. The Lombard plum tree will not unite with the peach stock, neither will most of the Damson varieties.

The Geuii plum, which really is a Dutch Damson cannot be united on to peach stock. This Geuii plum also is quite a subject for the Knot, and it is a great grower. It makes the largest leaf, and literally fills with fruit. But it is less hardy than the Lombard in its branches.

The McLaughlin plum should go with the Lombard. It is one of the best varieties for field culture, It is a size larger than the

Lombard, about the same shape, a little duller in its color, and while the Lombard is somewhat red, this plum is more given to purple, and in fact when there are but few on a tree it becomes almost the color of a Damson plum. In many instances just before ripening it shows a russet yellow, changing to a dull purple when the tree is loaded. It is the most even and solid growing tree that I have found, producing a top like an apple tree. It grows complete on peach stock, and will give the best satisfaction on upland thin soil. There will be strong objections to its being planted on other situations. Our crop of McLaughlin plums the past year which was estimated at 80 bushels before picking, reached 135 bushels neat, and the last picking just closed with the first picking of Lombards. Planters should be careful in setting trees of this variety. It has been sold under different names. We have sold many trees under this name. It is a purple bloomed plum and ripens between the 10th and 20th of August.

We try to raise and keep on hands most of the best varieties of plum trees for sale, as the Lombard, Pond Seedling, Imp. Gage,

Magnumbonum, Gen. Hand, Geuii, Damsons and Prune Plums and a host of other varieties, but find that the McLaughlin, and some other varieties which are not of so much importance as the McLaughlin, may be misnamed, and are sold honestly by responsible nurserymen so. Now, we have no further proof that we have the McLaughlin true, more than that our trees we believe answer the description of the original tree.

The native plums should not be planted but sparingly, only when they have been tried and given satisfaction. North of 40 degrees latitude we question if they will give satisfaction or remuneration for labor.

The large red plums are not apt to give the quantity of fruit that the small or medium varieties will show, and although finer for canning are coarser in grain and do not possess the quality for present use. Their great beauty will get for them a high price, and we have received a fair degree of satisfaction from the Pond Seedling plum. This variety is perfectly hardy and produces the largest plum grown.

The large yellow plums have not failed also to command a high price. The General

Hand is a very fine plum. But among this class if care is given we believe the Yellow Magnumbonum is not only one of the most productive, but also one of the hardiest of plum trees, although no better than Pond Seedling for present use of the fruit.

It is with the green plums that we get the best fruit for eating from the tree. Fine grained and sugary they make the best of butter also. The Imp. Gage, although when fully ripe it is not altogether a green plum, is fairly hardy, the tree is large and productive, perhaps one of the best of this class.

The white plums are the best for culinary purposes, all things considered, and perhaps should command the highest price. The variety which we fruit under the name of Washington has not proven hardy. They are a beautiful large whitish plum, with juice as nice as honey, and are remarkable for their mildness. The trees mostly have died, and we are now trying another variety under the same name, the character of which we cannot now speak. Considering that there are hundreds of varieties of plums, and different varieties, somewhat

differing, classed under the same name, we hope to obtain in a class what we desire.

A very rich preserve may be made from the prune plum, or from the Damson. But perhaps a nicer, and to an unprejudiced taste a better preserve may be made from many other varieties with the same treatment. For butter we strain out the skins and seeds, and find the medium sized plums satisfactory. In canning, the fruit should be sweetened to taste when put up, the fruit boiled in the syrup, as many have ignorantly condemned the cooked plum by presuming that sugar cast in the dish will suit to the taste this most wholesome and desirable fruit. The tartness of the plum requires that it be met to the seed with the sweet. And considered with other fruit it is not costly as some have supposed, since a bushel of plums will can about that many quarts. That a half bushel of plums canned up fifteen quarts, has more than once been said, which is more than a whole bushel of peaches will can. And one quart of plums will nearly equal two of peaches when served. If this rule of counting be true one bushel of plums should equal nearly four bushels of peaches in price.

## PLANTING TIME.

**A**S A RULE I would advise planting in the spring of the year. Not because it will give the best results with care, but that the buyer may be safer in his planting. The best time to reset a plum tree or any fruit tree is in the late fall or early winter after the frost has fully prepared the tree for winter. Trees removed this time of year without injury to the fiber roots by too much exposure will not lose anything. But as most nursery stock require freezing to drop their leaves, and ripen up the branch for winter, and tree men are anxious to get their stock out of the reach of the freeze, this stock has got to be stripped of its leaves, called by nurserymen stripping. Trees that have been stripped by hand are objectionable, as are also trees whose fiber roots have been subjected to any degree of freezing.

In accepting plum trees for planting, if the branches are light and fine cut off a limb. *if* the heart of it be brown or dark color this tree is objectionable. A plum tree to pay for planting should have a full round limb

green throughout, full bud with heavy shoulder. Many plum trees have been put on the market which have been a subject of drouth. The hole for setting the tree is not apt to be too large or too deep, or is there apt to be too much strong soil, leached ashes, or bones put in the ground on planting the tree provided you do not intend to give any further care. But if the tree is to have proper care, see that the roots are all got under and pure soil well firmed about them. Keep manure from the roots, and for a top dressing ashes or coal dust is valuable and will keep down weeds. And the general rule is to trim all side limbs, leaving the main branch, and so set that at the soonest possible time it may cover its body with branches and most particularly to the southwest.



### CARE OF TREES FOR THE FIRST THREE YEARS.

**I**F A TREE is hardy at the end of the third year after planting, it may after that be expected to give satisfaction. It turns out in many cases that about the third year from planting even the hardiest trees find something wrong with them; that the fourth year after planting the tree instead of growing is simply dead, or nearly so. I am sure if these trees had been handled the fall before, they would have been found light and rattling. The amount the soil has been worked even in setting the tree is quite sure to hold a moisture for two years. If during the third year from the first working or moving of the soil, this soil is not touched it will become sufficiently solid to transmit heat from particle to particle. And during the hot summer, as the last of July and August sun bear upon this worked and settled soil, the effect of the heat will be carried as deep as the root, and the soil will be robbed of all the moisture which it should have to sustain the tree. So that the amount of moisture that is required to keep up the leaf and the branch, in a hot atmos-

phere reduces the tree to a state of worthlessness which is easily distinguished from a tree of the same kind whose roots are standing in a soil not lacking in moisture. We here state that this is the direct cause of yellows in peach trees. We have never seen the yellows on peach trees with proper care. Let him who will object to our experience dig down by a tree in hot August weather where weeds and grass are standing around and see if he will not acknowledge our practice; yes, and wonder how those leaves can be kept green with a soil dry deep down as this must be. Such trees when they have received the stroke will generally come out the following summer, but cannot grow much, and at best show but a yellow leaf. The plum mostly dies outright, although it is not uncommon even for them to show a coating of yellow leaves before they die.

Some soils the moisture rises in, but any soil can be kept moist by keeping the surface mellow, which may be done either by working or by mulching. Then a tree should be kept straight. Should it get to leaning with the wind, the time to straighten it is in the spring; stack plenty of dirt around it until it

holds this position. Keep down all sprouts and cut off such branches as are straggling, or that go beyond the limits of convenience or care for the tree.

### SUBSEQUENT CARE.

IT IS NOT out of the order that a tree the fourth year after planting puts on a full load of plums. It is a question whether or not it is best for a tree to bear so young. We are sure it is not good without the tree is under proper care, since it will most surely hinder the tree from attaining to full proportions. A full crop of plums on a young tree sets the size, or in other words, causes the tree to enter in life as a full grown tree and thereafter will attain like proportions in growth. We have no objections under proper care to the smaller trees. While we grow them closer together, say only about 12 or 14 feet apart, we can also gather most all the fruit from the ground, and also catch the curculio with much greater ease. It is a question if all soils can be held in shape to grow these small trees. The nearer, however, that the soil returns to the state of Nature in which it was when the woods stood over it, the hardier and more satisfactory the orchard will be.

There is no doubt but that the burden of

the tree is to perfect the kernel which the pulp of the fruit surrounds; and I question in a full crop if it can, without great danger to the tree, except the soil is covered, or has a retreat from the continued effects of the hot sun. Boards, buildings, bricks, or anything that will catch the rays. I doubt if there is anything however that will give the returns which a generous and continued use of the hoe will do under every part of the tree which the drag or cultivator may not get at. A quart can of salt cast under each tree before the hoe begins, every year or two, gives advantages in more than one way. Those insects know where to get better for themselves than we may tell them, and they know where to not get; and they do not need us to tell them of a soil that will not produce them congenially. We understand that an inch of soil thoroughly pulverized all over every part of the ground under a tree, with the balance of the orchard cultivated, will retain that life and moisture which the inexperienced has not conceived. However, we do not care to have the ground hard, providing it is clean of all weeds or grass during May and the first of June, or when the curculio is most effective in his work.

Cut off all water sprouts, (except there is need of a limb) which sometimes make their appearance in profusion, and let all manures that may be used be cast in the fall and hoed or cultivated in. Perhaps the best results will be found from a liberal use of potash and bone. Bone must be used. The many seeds which the tree must perfect demands it. It is not uncommon to kill trees by putting barnyard manure in quantity around them in the spring. We have done the like. Or to begin to work them in hot summer with the plow when they have not had proper care for a time. To induce bearing, and to hinder the excessive growth, and produce hardiness in a tree, there is nothing better than to plow as close to the tree at one side as the tree will seem to permit, and that deep, cutting all the roots possible. But in no case do this only in early winter. The following summer a few furrows thus plowed to the tree will fill full of fibrous roots which will be a great stay. Moreover, the tree will by root pruning not make long strides of growth which is always an uncalled for burden under the August sun. Trees which have failed under the power of the hot sun, and which have thereby

received a perpetual injury, should not be propagated from, since trees grown from buds taken from these sickly trees are the get or inheritors of this constitutional weakness and must necessarily be more liable to the effects and are less capable to withstand the same power which subdued the parent tree.

## OF THE CURCULIO.

THE enemy of the plum tree in propagating itself by way of the seed, is the curculio. The curculio, by nature, seeks to develop itself in one of its forms in the plum. The plum is a direct home and perfection to its purpose. From a little nit deposited under the skin of the plum it hatches into a worm in favorable weather in about seven or eight days, and makes its home in the plum until it fully develops in this worm or larvae state, driving as a rule straight ahead as well as it can in the green pulp of the fruit. The plum, by its work, becomes its victim and must go from the tree by common laws, and is lost, while the further purposes of the curculio are only enhanced.

If we want to raise plums we want to know the ways of this little bug or beetle so that we may successfully stand between him and the plum. For there is no question that if the season is favorable and the soil congenial, that he will bounce every plum on the tree in his reproductive proclivities; and it is



really surprising how bright and agile he seems as you watch him moving up to his business. To those who have not seen him let them spread a table cloth under a fruiting plum tree in the latter part of May, give the tree a sudden, solid jar, then look upon the cloth and you will most likely catch sight of a little beetle, near the size and color of a buckwheat grain, with a probocis like an elephant's trunk which he uses to make a new moon on the plum. This is him, perhaps playing 'possum already; leave him alone and he will run off like a diminutive elephant.

This curculio, like the striped cucumber bug, is sensitive of heat and cold. In the cool morning it can not fly. In the heat of the day it is excellent on the wing. There is therefore no use bothering about him when it is hot, say 80 deg. Fahrenheit, since he is easily scared and will fly right out; and there is no way to keep him out then without you stay by the tree more than you will like; else make the plum and branches offensive; else keep the soil such that it will not further his purposes. All things considered, there is none of these we have found to be suc-

cessful alone. Of the curculio, its life and habits, there is sufficient written, and it is the etomologist's work. We want however to show how to keep him off of the plums. We do make a curculio catcher of our own invention, and by having our trees in proper shape we can speedily and most surely catch them while they are in the dormant state. This is before the heat of the sun makes them active. About one hundred trees per hour can handily be cleared of all insects injurious. This work begun with the morning twilight is the most pleasant and surest to make perfect work. We put say two quarts of new lime in a half bucket of water in a wooden pail. This bucket is left in the centre of the row. From there we go to the end and back the next row to it. The insects are lodged in the center of the catcher, and dropped into the lime water. Passing to the other end and back the next row, and as before the insects are dropped into the water and stirred. This water will be found useful at the foot of the tree when the work is done.

By a convenient arrangement which we call a door the tree passes about to the center

of the catcher, which is but a slight hindrance to the carrier, who can open and close it at will. The catcher, which rests on the ground at the foot of the tree, is carried by two handles under the carrier's arms, and is light and convenient to handle. The jar is a pole of sufficient length to jar the tree, large or small, as it may be. Near the end of this pole is a wooden pin through the centre. With the use of twine we make a ball of wadding on this end, of at least eight inches in diameter, all sewed solid to its place, and by this the tree or limbs as are required are jarred without bruising the bark on the wood.

It may be understood that we have heard of many curculio remedies; but our experience with him is such that we know that to get a favorable crop of fruit which is salable, and leave the tree in proper condition, we have to catch the bugs as a rule. We know there are cold wet springs which favor the fruit, and that the first coming of the curculio has been very unfavorable to them, and that in such seasons the first and principle work of the curculio is but very slight; and we are well aware that there are certain spots

and situations of land where he does not molest the fruit but very little, and that circumstances may cause situations to be offensive to him; but we have yet to believe that an orchard will in an ordinary season bear a general crop of plums of any kind or variety whatsoever, without catching the curculio and killing them, and the time to catch them is when they are inactive as at early morning, when it will not require more than a couple of fair strokes with the jar to dislodge them, as experience will show.

## HOW TO PLANT AND CARE FOR A FEW TREES.

**I**N PLANTING a few trees let them be as near the form of a square as possible, so that the ground may be kept in a measure more clean. If convenient cast a fence around them, see that the hogs are in this enclosure the three weeks following the middle of May, also the last three weeks of July. Let some oats, wheat bran, or shelled corn, be sown each morning under the trees for the hogs to hunt up. These will require but very little trouble beyond the proper care of the hogs. But circumstances alter cases, and it may be more convenient to use a coop in which is an old hen with a lot of chickens. If several trees, there should be more than one brood of chickens. In such cases as this it is required that the surface of the ground be cut clean with a hoe and if need be swept, and a little bran scattered about under the trees. We do not doubt the efficacy of this plan with some care, since it would be offensive the same as the hog lot, and the curculio which are not caught cannot find

their home. If either of these plans cannot be had, then get a table cloth, sheet, or what is better, three or four yards of good brown muslin, divide it and sew the edges together half way; then tack slats around these edges to handle it by. And just before the calyx that covers the plum has passed off let the tree pass up to the center of this muslin catcher where it was sewed to, and with a jar as before described dislodge the curculio and burn them. Three times will rid them for a few days, when the same operation may be repeated in the morning, at evening, and the next morning, &c. Again, it will be observed that all cool or rough weather, and also that the most of June and the first of July the curculio will not be found. The last of July will require much care again.

## HOW TO CARE FOR AN ORCHARD IN FRUITING TIME.

THE ground should be cleaned around the trees in the spring before the curculio puts in his appearance, and unnecessary limbs removed; also all such limbs as would be in the road of the catcher. The trees, or at least a portion of them should be jarred while the blossoms are yet on them to catch such curculios as are to be found. The ground should be stirred in the spring before the moisture from the winter is out of the soil, and perhaps the best thing to do it with is the one horse plow, and with care not to cut too many roots this time of the year. That which is not reached with the plow should be put in order with the hoe. This soil being cut as above stated will be much easier attended to later in the season. As the little plums begin to show themselves see that the curculio are caught out of the orchard, and if there is negligence in this work it will be observed by examining the plum; for as soon as a plum is stung the place will turn dark, and show a new moon, or properly said, a

crescent shaped incision near the blossom end of the fruit. This is done by the curculio, and the nit is deposited under the skin of the plum which is cut loose, and secures to it a safety which it could not have were it deposited otherwise.

If there is some fine variety of fruit which is wanted to be saved, it can be done even after it is stung by using the point of a knife or the thumb nail, and push off the skin of the plum within the crescent shape. This can be done speedily, and if you wish to see the contents of the nit press the thumb nail backward towards the stem upon the skin of the plum under which is the egg, and its contents will rush upon the surface of the plum. This work will not injure the fruit in the spring, as it will speedily grow over again; but such work will not do in the heat of the summer as it will be likely at such time to rot. After the orchard is once cleared of the curculio it will require repeated tests to see if he comes again. In such cases it will be necessary to go to the skirts of the orchard, test only the warmer and unexposed places in the orchard, or that part of the orchard nearest to other fruit trees; and in case but few are



found there will be no need to look further, and the main work will now be found around the edges of the orchard for a time. The middle of July, sooner or later as the season may require, (there will be four or five weeks previous to this date that curculio will be scarce), throughout the orchard the catcher should be used, as the curculio may be found now coming until the plums are picked. We have caught curculio after severe frost in the fall. It must be remembered that the main fight is to be waged on the curculio in the spring, and if successful then the battle is fairly won.

Some trees bear more fruit than they should, not only for the good of the fruit, but for their own good. The question how to meet this is not handily solved. We have found it as hard on the tree to pick the green fruit from the limb as it was to ripen the fruit. We would prefer heading in branches with the knife which were overloaded. Another season we will trim certain branches clean of fruit, leaving the others untouched. Above all this we prefer the perfect working around the tree, whereby it will assume strength to care for itself. Yet it so hap-

pens that certain trees fail to cast a portion of their unbearable load, in which case the knife should be freely used to save the tree.

## PLUM ROT.

PERHAPS there is nothing so vexatious in the plum business after all as the plum rot. Instead of getting a nice lot of plums, to see them all rotting instead of ripening. We observe that there are two kinds of plum rot we have to contend with. One is the rot from the calyx or covering over the little plum in May, the other is the rot before the ripening time in the latter part of July and August. This rot from the calyx is not universal, as it only goes with those varieties which have a heavy blossom. We have not seen the varieties with a light blossom and a thin calyx injured by it. Damsons, the Lombard and the Gevii, most of the Gages, and many other varieties might be named which escape the rot from the calyx. But some of the best varieties will lose more or less in wet seasons even with the best of care, as the McLaughlin, Pond Seedling and all the heavy blossomed varieties. McLaughlin, although one of the most profitable of all varieties with care, suffers the most from the calyx rot. This heavy fur-like coating over the little

plum seems so slow about getting off, that before the plum has lost his coat it generally gets caught in the rain. It does frequently prove to rain one or two days about that time of the year, and when this coating is loose from its natural place it is ready to decay and turns brown. The little plum at this season enlarges very fast, and a few days damp and rainy weather fastens it in the skin of the tender plum, and is equivalent as a rule to a rot. When such trees are in moist places, or sheltered places with dense foliage, this calyx is rendered tough in damp weather, and fastens itself on the plum, so that three out of four of the plums will be lost, which is equivalent to a failure for the season. In no instances have we had a failure only in such places as before described. By this it will be observed that it is better for the trees to have the sun and the air, and that the ground should be kept clean under the tree. But in case we find trees shut out from the sun, then move the obstacles as much as possible, following the rule we laid down. Much can be done in jarring the limbs and moving this covering off in dry spells.

The most objectionable and universal plum

rot occurs just before the plums are ripe. It is a time of the year when heat will produce decay superior to the healing powers, and the effects of this decay is sensitive to the touch. In other words the rot grows on another plum reaching to its bounds the same as it grows in itself. We regard the sting of the curculio at this season of the year as a two-fold danger, first because it endangers the plum to rot by opening its pores, endangering it to deadly particles by which it will begin to rot, and secondly, because of the nit in its development in the plum.

This first danger is what we wish to avoid in this chapter, and to do so we must also keep the fruit from the second danger; and in order to avoid the second we must see to it in time and not after the plums are too much rotten. Let the curculio be caught or let the plums rot. We for other reasons try to keep our trees clean, and find that in a term of years we are not troubled with a host of insects which were there when the first care was given. Worms of all shapes and sizes, and many varieties of ants, bugs and beetles and spiders, seem to be gone. The green leaf louse or big black antemire's

nest, which would stop the growth of the twigs in the spring, millers and caterpillars, most all disappeared, since plum leaves have not, as might be understood, proved a sufficiency for them, all of which is no little thing in favor of plum growing. When this rot is seen on a plum the sooner it is removed the better, for it will be a hardy plum that won't rot with it if they can get together. When this rotting first appears pick it all off, even though it is but a mere speck to be seen in the plum, and about two days after repeat the work again, watching it up for a fortnight, or until the stung fruit is removed. It will be observed that we have not advocated the destroying of the stung plums. But on the other hand the catching of the curculio and the keeping of the soil in such care so that it will not be a nest for its further development. The Wild Goose plums when first introduced, were said to be curculio proof, and in fact many varieties have certain pleas for them of like character when first introduced. Considering the many styles and varieties of fruit which we have fruited, the planter may rest assured with us that to attempt to put upon him a curculio proof plum is a nonsense or a nuisance; and that a va-

riety may be said to be *curculio* proof only because of the peculiar situation in which it is found, since we are sure that a variety of plums exempt from the attacks of the *curculio*, as a rule must be a nuisance and not deserving the name.

## BLACK KNOT.

**B**LACK KNOTS on plum trees may be said to be another obstacle against the planting of this fruit; and, indeed, many trees are lost, and others, most unsightly objects because of this disease. It is a trouble, however, that does not affect varieties alike, since there are but few varieties which seem addicted to it. The Damson varieties give the most trouble, and the Lombard and Gueii are not so much affected, yet they require continual watchfulness. We have occasionally seen a knot on a Pond Seedling or McLaughlin, but have not seen knots on any other varieties, although we allow that any variety, without it be the natives, may knot. Yet we believe the three kinds named are the only ones that will require watchfulness. When there are knots showing on a tree cut them off and see that they are burned except in cases where it is necessary that the branch should remain. In this case, with a knife or some sharp instrument first remove all the knot visible; second, cut out all the little white, round, porous specks which can be



seen; third, and last, observe a dark brown red streak in the surface of the wood, reaching up or down from the knot, cut back till this will not be seen. When the above rule is followed the knot cannot come there again, and by covering the cut with wax it will soon grow over. Observe if the brown streak is left the knot will most likely break out anew. We do not find the knot troublesome on trees of regular habits or on trees that do not sport in growth. But excess in growth the same as excessive bearing means a time of diminished strength as well as a time of diminished life. Overgrown trees means soft wood, and overburdened trees means inferior life in wood. And the same in each case means more inviting to the enemy and less capable to withstand the enemy.

The above is a true meaning and the only way to arrive at a satisfactory solution of the inarching of the enemy into the branches of our fruit trees. We therefore wish to be understood that a tree in soil made right and under due care is a guard of itself and is clean from receiving, while a tree left to itself in an uncared condition to sport or to wilt will most likely be found sheltering an

enemy, the same ultimately producing what is truly termed disease, since it is no more clear.


## OF THE BORER.

WE HAVE lost many trees by a little white worm we will call it, which attains to near an inch in length, which works under the bark of the tree. This borer works on the body of the tree and most seriously effects those trees which are forked. To this end see that in planting time the trees are trimmed to one straight branch, upon which may come out the side limbs. It often happens that the south side of a tree is affected by the sun's rays so that there will be a spot actually killed, and that if this place is not cleaned off and waxed these worms will sooner or later get started in the injury, and if left alone will likely kill the tree during the coming summer. Perhaps the tree should be washed with a solution of carbolic acid if there is serious trouble resulting thereby.

This borer has done us serious injury, since many of our trees were left in planting so that there were two main branches, in which fork he seems most easily to get his hold, doing much damage to the tree before we

were able to dislodge him with the knife. We do not find it advisable to shelter the body of the tree with other than its own natural branches, since any close artificial protection is likely to result in a rough heavy porous bark which is not desirable like the clean tough bark fully exposed to the air. It is in the crevices of this rough porous bark that the miller deposits the nit which makes the borer. And it is only in case of the many nits and very fine worms which are likely to escape notice that we have advised the acid to destroy them. Perhaps there is no better month in the year than October to work with this enemy to the plum tree. Persons who fear the autumn leaf blight, wherein the branches ripen up and cast their leaves in early autumn, will find an actual enemy in this borer which works between the ground and branches. By our practice the leaf blight will not be found an injury.

### VARIETIES FURTHER CONSIDERED.


 OUR PURPOSE in this book is not so much to mark or distinguish varieties as it has been to indicate the proper care for plum trees. There are many good varieties which we are not enough acquainted with to speak of them in particular. There are some new varieties also for which much merit is claimed which we are just now testing. We believe the Wild Goose plum to be the best of the native varieties, and that it may profitably be grown where it will fruit. But as far north as Columbiana county, Ohio, it will not pay to grow. Since this plum tree grows so well here and does not carry fruit much beyond the blossom, it has been charged that it should be planted with other varieties, as it is apparently a pistillate, or without fertilizing power. We do not accept this theory, but believe the blossom is perfect, and on account of the cold it is rendered weak and insensible of the powers of growth, and thus the tree becomes abortive and the fruit is cast as soon as it comes into form.

We here give first a list of blue plums which may be successfully planted where plums do well, naming Shopshire Damson, Quackinboss, Geuii, Blue Imperatrice, German Prune.

Purple and Purple Bloom Plums—McLaughlin, Smith's Orleans, Richland, Shippers Pride, Duane's Purple.

Green and Yellowish Green Plums—Imperial Gage, Moore's Arctic, Reine C. D. Bavay, Spalding.

Yellow and Greenish Yellow Plums—Gen. Hand, Jefferson, Huling Superb, Prince's Yellow Gage, Scuyler Gage, Magnumbonum.

White or Light Yellow Plums—Washington, Coe's Golden Drop.

Red and Red with Blue Bloom or Scarlet—Pond Seedling, Lombard, Wild Goose. Red Gage.

We might name many other desirable varieties. Bleeker's Scarlet plum, which is the Lombard, should not be confounded with Bleeker's Gage, which is a yellow plum, productive and good fruit. Some varieties are not hardy in body. This will be noticed in the Washington, Imp. Gage, and some other varieties not so much. Other varieties

are not hardy in the branch while the body shows no failure. This is much noticed in the Duane's Purple, the Gueii, the Shopshire Damson, the Bradshaw, and some other varieties, more or less, the growth of last year often being killed half way back.

Other varieties the borer works in, while the ones named are not troubled by it. There is no variety we have tried which the borer works on so much as the McLaughlin; the Lombard next; the Washington and the Magnumbonum are not free from him. We have lost several good McLaughlin trees and some of the other varieties before we knew the white, creeping bark eaters were slowly working their way around the body, and in the crotch of the tree underneath the bark. Suffice it to say, when we are awake to the demands of that which is before us to do, and understand the enemies which we must encounter in the way, the victory is fairly won, since we are enabled to meet him upon our own grounds.

The obstacles in the way of plum growing are doubtless in the way of the slothful. It can scarcely pay any planter to set plum trees in the face of these obstacles which he may but vainly hope to escape, without

he also proposes to care for them the same as a horse or a cow, to be cared for at the proper time. A man may feel more impelled to care for his live-stock than to care for the live trees. Truly his feelings should not be so apace from humanity as to be easy with stock suffering by his negligence. But as far as the gain in dollars and cents is concerned, we do not question, by the examination of orchards and fruits and fruit trees planted, that the loss through negligence on the part of not caring for the trees when they need feed and shelter, far surpasses to quiet the conscience of greedy man in case the whole substance and value of the neglect was set before him.

We add in conclusion, that he who with us believes in attainments through victory not for the sake of greed, but for glory in victory, can see no objection to obstacles which he can overcome, but rather pleased with the obstacles lest he be found sleeping in the same bed as the slothful. There is therefore no excuse in accepting a failure and drinking out of the same cup which a grumbler takes up, when a clean bed can be had with that which is good in store. That which is best is in abundance and it will never run

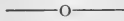


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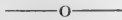
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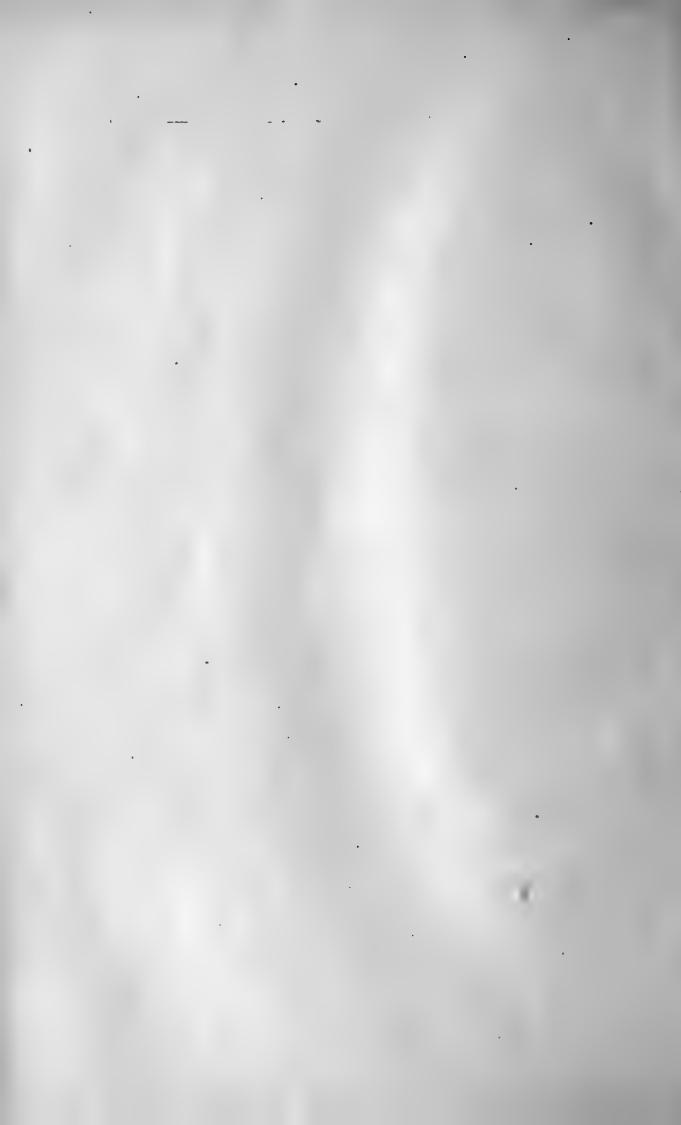
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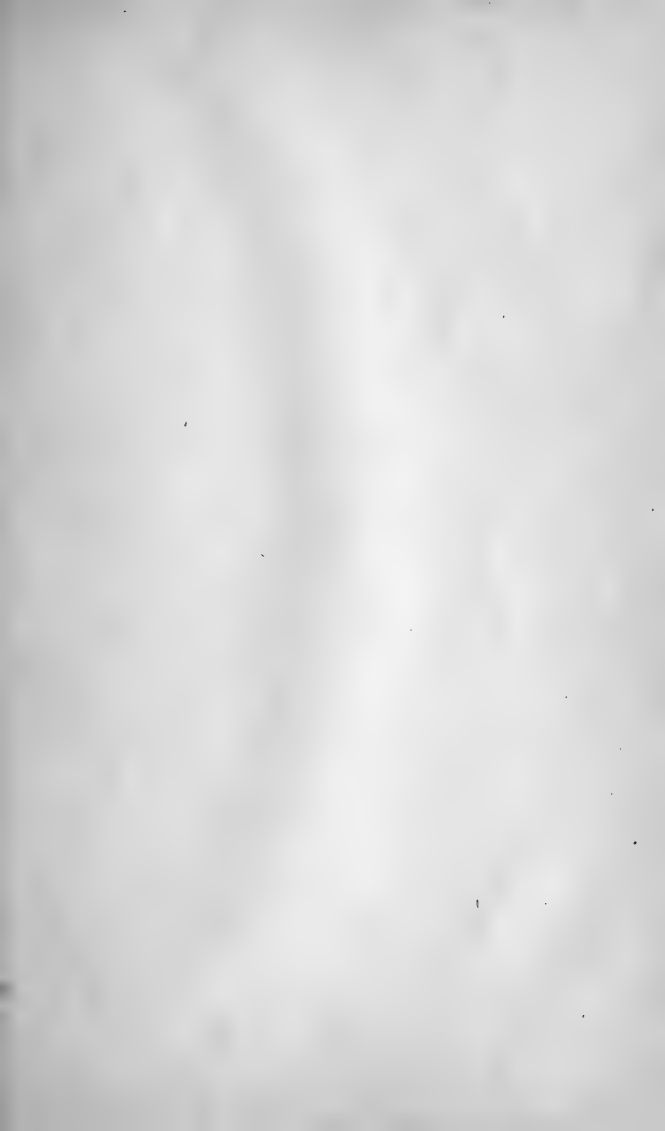
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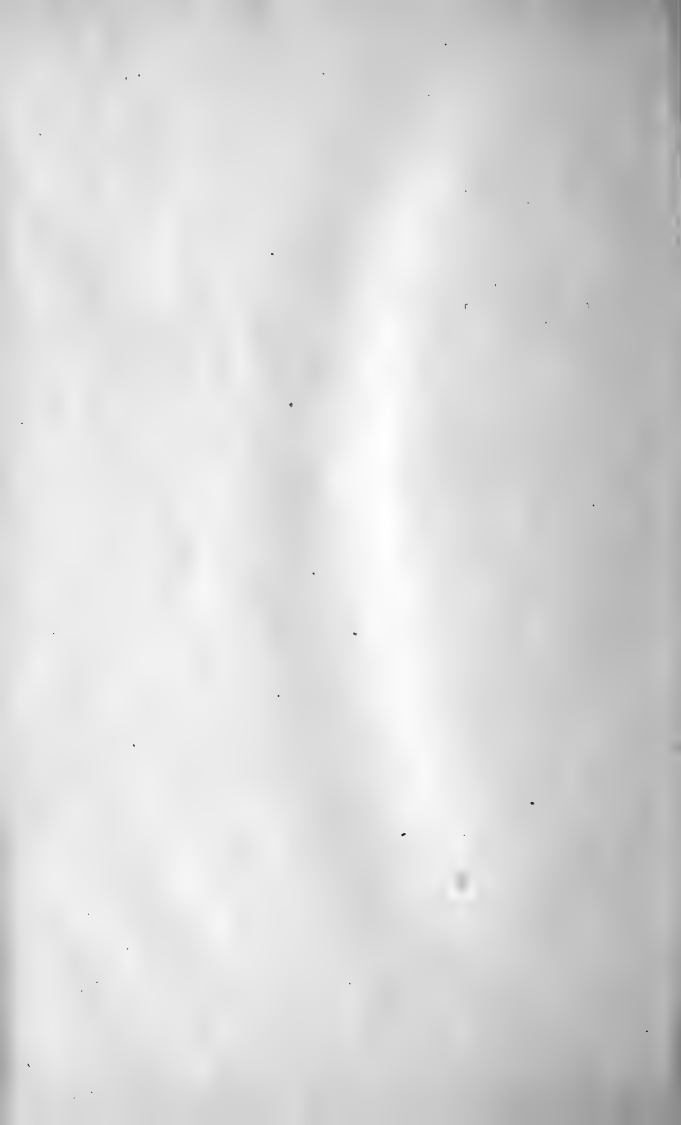
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