

and make their appearance in a wine-cellar below. Plants have a vast power in overcoming obstacles, when foraging for food. They are like a hungry animal which no fences can restrain when there is food beyond. The movements of roots in soils proceed on certain principles of utility in connection with the welfare of the plant. Some need much more moisture than others, and the roots will drive through rocks to obtain it; others need silicious food, and will penetrate through a clay bank to reach the desired foraging ground. The urgency with which nature drives plants and animals in pursuit of food is almost irresistible.—*Journal of Chemistry.*

### The Plum Curculio.

This insect belongs to the same family as the Colorado Potato Beetle, but flies much more readily; has the same way of playing "possum" when you approach or disturb him, and consequently is easily caught by the thumb and finger on the tree or by jarring the tree, when he falls to the ground like a dead thing, but will soon crawl off or fly away if undisturbed. The curculio is of dull black or very dark brown color, from  $\frac{1}{2}$  to  $\frac{3}{4}$  of an inch (?) in length.

The early morning is the best time to hunt him as he does not like to fly only in hot still weather, but if they are any way plenty they should be looked after three times a day. I have seen them fly from the woods to my trees, mostly towards sundown of a still hot day, so that one is not safe from them even when none are propagated on his own grounds.

There is not a particle of benefit to be derived from any wash or application of any substance to the tree or ground on which the tree grows, as the Little Turk "careth for none of these things."

In addition to killing all found on the trees pick up every plum that falls to the ground, and see that it is eaten or destroyed so as to leave no eggs to hatch or larva to crawl out into the ground, or to hibernate under the bark of some tree to start the "breed" next year. If one has a large number of trees it will pay him to make a curculio catcher, but I will not take room here to describe one. It may be well to say here that the curculio stings cherries and peaches almost as readily as plums, and has been known to sting the apple.

He must be looked after as soon as the fruit sets, till the last of July, as in some seasons there are two crops of the beetle, but the greatest danger is when the fruit is about the size of a pea. The cherry does not fall like the plum, when stung, so that to eradicate the beetle in one season they must be picked off and destroyed effectually.

Some seasons are so cold that the eggs laid in the plum do not hatch, as they require about 70°; the eggs dying in about a week if not hatched; and if there is an entire failure of the plum crop one year, the "beetle" will be quite scarce the next, and a crop may be had; but one is never safe to trust to anything short of daily examination from the time the fruit sets till it is about grown.—*Cor. Western Farmer.*

**HORTICULTURAL PROFANITY.**—The *Norristown (Pa.) Herald* says that a man in Lower Marion wrote to the editor of a horticultural journal, and asked: "What are the most advantageous additions to dried grasses, for winter ornaments?" The editor replied: *Acroclonium roseum*, *A. alba*, *Gomphrena globosa*, and *G. globosa carnea*. When the Lower Marion man read this he fairly boiled with rage, and immediately sent a note to the editor ordering the paper to be discontinued. He said no editor who swore that way, just because he asked a simple question, should have his support.

**FERTILIZING PLANTS ARTIFICIALLY.**—It is announced from Vienna that a process, indicated by M. Houbrenk, for facilitating the fertilization of plants, has proved successful in the Botanical Gardens there. The process consists simply in touching the end of the pistil—that is, the stigma—in a flower with a pencil dipped in honey, or better, in honey having mixed with it some pollen of the plant operated upon. A Hibiscus Mexicanus, which had never yielded fruit, having undergone this treatment, produced quite a large quantity of good seeds. With several fruit trees the process also succeeded. Further, after operating on certain branches only of trees which did not yield fruit, it was found that fruit developed and was formed on these, while the branches left in the natural state gave none. The effect, if real, may be explained by supposing that the honey retains the pollen grains on the stigma, and thus favors the formation of a pollen tube, which is indispensable to the fertilization.

## THE FRUIT GARDEN.

### Cranberry Culture.

In reply to the inquiries of several correspondents relative to the culture of cranberries, we would say that but comparatively few farmers have suitable swamps or meadows for the profitable culture of this berry. What is most desirable, in truth we may say what is demanded for cranberries, is water, sand and muck. The plant is very peculiar in its habits, one of the most easily grown if in a congenial soil, and one of the most obstinate if not. Joseph J. White tells us that alluvial formations are the only ones in which the cranberry can be successfully cultivated; though this formation includes the most barren and the most fertile soils, yet its character is well marked and it can be easily distinguished. Sand or quartz rock, pulverized or granulated, is alluvium. The rich interval lands near the outlet of rivers are alluvium, and the mud found in narrow bays and creeks, and the muck or peat underlying swamps and fern lands are of the same character. Meadows formed partly by deposits of mud and partly of decayed vegetable matter belong to the same class, in fact, all alluvial formations caused by the action of water.

The cranberry cannot be successfully cultivated in drift formation, as hundreds of experiments have proven. Prof. Agassiz described the drift formation as being that portion of the earth's surface which is formed by glacial action, and consists of rocks not in place—that is, stones out of solid ledges, stoney land or gravel and clay. Boggy land well adapted to the production of this fruit, has been ruined by using drift material upon it with the mistaken idea of bettering the condition. From this our readers will be able to make proper selections of soils, and for the best methods of cultivation a good work on cranberry culture should be procured and studied closely, or, what would be better still, some individual visited and consulted who has a practical knowledge of the art.

Analysis shows that the cranberry contains little material drawn from the soil, the most of it being derived from the atmosphere and from water, and consequently this fruit will grow where but little else will. The American cranberry is divided by writers upon the subject into three varieties, the "bell," because the fruit is bell shaped; the "bugle," so-called from its resembling a bugle head, being elongated and approaching in shape to an oval; the "cherry," being spherical in form, and somewhat similar in shape, size and color to the cherry. Cranberries are found, however, existing in all the intermediate shapes between those mentioned above; for instance, the bell and cherry are distinctly marked, but there are specimens found bearing so much resemblance to both, that one could not tell to which particular variety they belonged.—*Ohio Farmer.*

### Water Melons.

J. V. K. Wells, near Milford, Del., has the reputation of raising immense crops of melons of splendid size and superb quality. The editors of the *Peninsular News*, thinking it would prove acceptable to their readers, has taken the trouble to learn Mr. Wells's method of culture, and presents them as follows:

"His patch contained nearly five acres, and last winter it was an old sedge field, worn out land that had been uncultivated for several years, and abandoned to sedge and persimmon bushes. It was a sandy loam soil. He cut the bushes out of it and ploughed the sedge under about six inches deep early in April. With the rake-harrow it was then thoroughly pulverized and afterward laid out in squares six by eight feet. At the crossings of the rows he scooped out the earth with a hoe and put in a large shovelful of well rotted barnyard manure. This was covered with the hoe, and just before planting the seed a handful of Pacific Ocean guano was worked into the surface soil over each hill. The seeds were planted about the first of May, and when they were well up, strong and vigorous, he removed all but one plant in each hill. This was allowed to grow under a good cultivation with the hoe and harrow, until the vine began to set its fruit. Each vine was then prevented from setting but two melons by pinching off the blossoms, and the vines themselves were pruned by pinching in the terminal end. When these two melons had attained a size of six or eight inches in diameter, one or two more were allowed to set, and all other blossoms remorselessly removed until these last ones were well advanced toward maturity. After the first two were ready for market and the second

two had attained the diameter of six to eight inches, another one or two were allowed to set, and in this manner the vines were kept in bearing all the season, but at no time was any vine allowed to carry more than four melons, and in some instances but one or two. By this treatment the productive vitality of the vines was all directed to producing large sized melons. This is the only method by which the enormous melons of twenty to forty lbs. can be produced. If the vines are allowed to set all the fruit they will, the size cannot be great; but if each vine is allowed only to bear one or two melons, it will have vitality sufficient to carry them to an enormous size. The variety grown by Mr. Wells is the *Gipsies*."

### Blackberries.

At a late meeting of the Indiana Agricultural Society, Mr. Ohmer said he had been very successful in growing blackberries. He had been in the business fifteen years, and lost but two crops in ten seasons. Three acres had averaged him \$10,000 per year. His rows were eight feet apart, and he sets his plants four feet apart in the rows. He planted posts four feet high, at intervals of thirty feet, and from nails on the top of the posts he stretched wires from post to post, to which his vines were trained. He ploughed once in the spring between the rows, and then put in the cultivator or harrow. He did not seek to make large canes, as these do not produce the best crops. He pruned back when the vines were three or four feet high. Allowed the old wood to remain among the vines from year to year, as a support to the young vines. The laterals he cut back two feet, or even less if the vine was delicate. Did not allow them to grow too thick, and no plants were allowed between the rows. The Kittatinny was his favorite, and if he were to plant ten acres he would plant all of that variety. He marked in half-bushel drawers. Raspberries pay better when sold in quart boxes. His soil was clay with a substratum of gravel. He did not manure at all.—*Mass. Ploughman.*

### The Best Variety of Strawberry.

It is remarkable that a variety so old as the Albany Seedling, or "Wilson," as it is popularly known, should hold its own so many years, in spite of numerous new introductions. Gradually, however, it seems to be giving way to others. Last season the markets of Baltimore, Philadelphia and Washington, had large quantities of other kinds, and it was noted that these varying varieties were much more abundant than in former years. Among the leading kinds which, by this test, are growing in popularity, were Downer's Prolific, Boyden's 32 Green Prolific, Juncunda and Charles Downing. Triomphe de Gand, which for a long time seemed to contest the ground with the Wilson, was not so often seen. Still for all this the leading kind in all these three markets was the Wilson. It bears so abundantly, and grows so well generally, without being choise about the character of the soil or situation, that in spite of some deficiencies, in other respects it will probably be in favor for some years yet.—*Ex.*

### The Elder.

This is a very common shrub, and will grow in any soil without irrigation, and will not only make shade, but will also make a good and everlasting fence, if planted in the following manner, and if properly trimmed, quite ornamental. During the autumn season, when the first rains make the ground soft enough, dig a trench about two feet deep, and leave it open until the first or the middle of February; then cut your slips from three to four feet long, and of two years growth wood; make holes with a crowbar in the bottom of the trench about eighteen inches apart, stick down the slips, throw any rubbish in the bottom of your trench—straw will do; fill up the trench with earth and pack it closely, and in a short time you will have a good fence.

The berries of one variety is very much esteemed by many, in the shape of pies and wine, and what can be more gratifying to the senses than the delicious perfume of its flowers in their season.—*Rural Press.*

A Mr. Bogart, near Napanee, made during the recent season 500 lbs. of sugar from 400 trees. The Messrs. Tubbs, of West Lake, tapped 420 trees from which they made 1,700 lbs. of sugar and 50 gallons of molasses. The molasses would make something like 500 lbs. of sugar, making in all, from the 420 trees, during the recent season 2,200 lbs. of sugar.