THE FRUIT GARDEN.

Culture of the Gooseberry.

The extremely variable nature of the growth of the different varieties of gooseberry, and the difficulty often experienced in getting at the fruit on some of the strong-spined, close-growing sorts, has led me to believe that a few remarks on an improved mode of culture which, although by no means new, is not often adopted, may be acceptable to amateur growers, to whom also any system which economises space, as this purposes to do, will, no doubt, be acceptable.

To all such I recommend the adoption of the Espalier mode of growth, as in every respect far more suitable for their purpose than the common mode of bush training, as it has a very neat and pleasing appearance, and the trees are far more easily manipulated and pruned than when sprawling over the ground. The system of pruning also is so very much simplified, that the veriest tyro could hardly make a mistake when the trees are fairly started on the right system.

We often find, in the common mode of bush-culture, that it is a difficult matter to prevent many sorts, such as the Warrington, for example, from growing as it were downwards, almost like weeping-trees: and being thickly set with spines, pointing mostly inwards, the operations of thining-out the young fruit and gathering the ripe fruit are thereby rendered rather unpleasant; besides which, the weight of fruit often bends down the branches so much, that on the occurrence of heavy rains all that on the lower branches is rendered comparatively useless for delicate purposes. By the system of training to Espaliers, all these troublesome matters are reduced to a minimum. Of course, there are ways and means of circumventing these and other inconveniences, even on the bush system of training, as for instance, by securing much longer stems free of wood, and systematically thinning out the branches, as only good practical hands know how, but these are more complicated in their management, and I claim for the Espalier system a perfect simplicity of management, and therefore, hold it to be the best adapted for the purposes of the amateur, to whom also it should further recommend itself as leaving a greater space for cultural operations, as well as from its general neatness of appearance

The amateur may obtain at the Nurseries young bushes fit to commence training at once, but if he prefers it, and time is not an object, he will do well to prepare his own plants, by selecting in October the strongest shoots he can obtain of such varieties as he may prefer (of which a list for guidance will be hereafter given), shortening them to six inches, and removing carefully every bud except the two at the top. The reason for this is to prevent the future tree from throwing up suckers, which are very detrimental. The bottom of the cuttings should be cut through horizontally close to the joint, and they should then be planted in an open space, in good ground, inserting four inches of the cutting, and leaving the two buds well above the surface. The object to be aimed at is to get a good stout stem a clear foot above the surface, and therefore, as soon as the shoots show signs of vitality, and probable growth in the spring, the healthiest shoot from the two buds must be retained and encouraged to grow up straight and strong, by training it to a stake as it advances in growth. With erect-growing sorts this is not much trouble, but with varieties of a drooping habit, constant care must be taken to fasten them to the stake whilst the shoots are young and pliable. This is all the care they will require the first year.

At any time during the dormant season these shoots should be shortened, so as to form a good stem one foot from the ground, at which point the future head, for training purposes, will start. Most of the buds, except four or five at the top, may be rubbed off. In the spring, as soon as growth commences, preparation must at once be made for training, but as they will not make any very great growth the first year, a few straight stakes, from two to three feet in length, will be all that will be necessary to keep the young shoots in position.

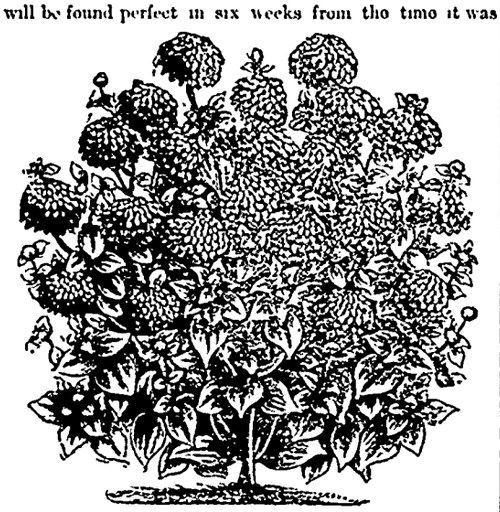
There are two methods or forms of training, either of which may be adopted with advantage. One is to train up a strong centre stem, and from this lead out the side-shoots horizontally at equal distances. The other is to train out two strong shoots horizontally, one each way, from the centre, but no centre shoot, these two side shoots being trained Cordon fashion, about one foot from the ground, and the bearing shoots trained upright from these to the top of the trellis at equal distances, so as to cover the whole of it. The shoots may also be trained in the shape of a fan, that is, diverging in all directions from a common centre; but I do not recommend this as the most economical mode of training, the growth being more unmanageable from the tendency, which all fruit-trees trained in that manner have, to concentrate the growth in the centre of the tree.—*Cor Florist.*

Plaster for Grape-leaf Blight.—F. R. Elliott writes to the *Michigan Farmer*: "I have tried plaster alone, sulphur alone, tobacco as a snuff and as a water decoction—alone each, lime, copperas and salt—but from no one alone have I gained. With the use of say four parts plaster, three parts copperas, and two parts salt, thoroughly mixed or ground together fine before using, I have found that the benefit of it was great, but that the first dusting must be as soon as the blossoms show, then again immediately after the setting of the grape, and then continued on from week to week until the seed of the grape has been fully formed."

THE FLOWER GARDEN.

New Double-Flowered Zinnia.

Zinnias must be familiar to all our aged readers, for as far back as we can recollect, the old single variety was grown under the name of youth and old age in almost every garden. The Double Zinnia we may call a new flower, for it has been introduced but a few years, and has found itself so well adapted to our climate that the double Zinnias in America seem a different and better flower than the Zinnias we see growing in Europe. The plant usually grows two feet in height, at least seventy-five per cent give flowers almost as beautiful and quite as double as the Dahlia. A plant that commences flowering in June will grow larger and handsomer, and the flowers better every day until destroyed by frost. Tie a string around the stem of a flower, or mark one in any other way, and that flower will be found perfect in six weeks from the time it was



marked. Having taken particular pains in improving the Zinnia, I think my strain is excellent; indeed, my Zinnias have been pronounced by florists from England, France and Germany, the best in the world. Seed will do well sown under glass, but must not have much heat, and plenty of air. Seed will, however, grow well in a bed in the garden, and transplant as safely as a Cabbage plant, and this should be done as early as possible, and when the plants are small; cold, rough weather will do them good. The plants begin to blossom when quite young, and the first flower is not usually good. Set them about eighteen inches apart.—The largest flowers are sometimes nearly six inches across. The Zinnias are coarse plants, and we do not suppose every one will be pleased with them, but we must remember that there are always places in the garden where large, and even coarse, plants look well, and those that are more delicate are useless.—*Vick's Floral Guide.*

Colors of Flowers.

As a gardener not deeply versed in matters scientific, I have often been struck with the marvellous beauty, as well as diversity of colors to be found in flowers. To thoroughly understand the blending of colors, and how the fertilization of flowers possessing certain hues is pretty sure to produce others of a specific color, one must needs be an artist. To suppose that a brilliantly colored flower has a special attraction for insects is no new idea, but to put forward the notion that rich colours are necessary in order to attract insects for purposes of fertilization, seems to me to be a mistake. Take, for instance, Mignonette; though its flowers are devoid of color, yet bees will hover over them in myriads. In this case not color but fragrance seems to be the attraction, the latter giving intimation to the bees that the food of which they are in search exists there in abundance. The remarks which you have quoted in reference to this matter seem powerful obstacles to the progress of the idea that color is necessary in order to attract insects for purposes of fertilization, and the conclusion seems obvious that brilliant colors have little to do with the matter. Indeed, if we were to follow the theory out to its fullest extent, it is obvious that none but brilliantly-colored flowers could exist, inasmuch as no others would be fertilized. Where, amongst wild flowers, is there to be found a variety of more brilliant and attractive hue than the scarlet field Poppy, and yet it is not so common as Charlock or Groundsell, or even Shepherd-Purse, none of which have flowers in any way very attractive? Perhaps, on further enquiry, it will be found that insects, after all, do not play such an important part in regard to the fertization of flowers as has been imagined, and that, in our haste to ascribe to them such virtues, the existence of self-fertilizing powers in plants may have been, to some extent, overlooked. There is another point to which attention should be directed. The pollen taken from a flower will only be effective on the pistils of others of the same species; and as the insects in their rambles proceed upon no definite plan, but alight on one species and then on another, mixing all kinds of pollen together, it seems difficult to imagine that under such conditions fertilizing properties will be retained. *Nature* says that autumn tints in leaves and fruits are often as rich as those existing in flowers, so also are the hues of the foliage of many plants, both tender and hardy, at all times. Of what use, therefore, are such rich hues in foliage, the normal color of which should be green? What one would like to understand better is this—Why is it that plants wholly of the same species, and, in all other respects, alike in growth, in foliage, in habit, in period of blooming, growing in the same soil, and existing under exactly the same conditions, should yet produce flowers of such wonderously diverse hues of color? In garden varieties of plants, most of this diversity is due to hybridisation, but the efforts of the hybridist in this direction differ from those of insects, inasmuch as, whilst theirs have no aim beyond the maintainance of life, the efforts of the hybridist are directed by intelligence towards securing a specific object. Of course, with such efforts have been combined the ennobling influences of cultivation, and what these alone have done in the way of improving the size, quality, and color of flowers, no pen can adequately describe. High cultivation also effects other changes in plants, into the character of which it is unnecessary now to enter.—A. D. in *The Garden.*

Plants and Flowers at the Toronto Electoral Division Society.

The following is that portion of the Directors' Report, read on Wednesday the 20th ult., referring to the above subject:—

Of the plants and flowers, the following is a list of new or rare kinds, not before exhibited in Toronto:—*Euonymus Aurea;* variegated, a hardy plant, admirably adapted for the climate, with glossy, golden leaves, deeply margined with dark green; *Achyranthus,* Mrs. Harvey, superior to *Gilsonii,* leaves bright carmine, and stems bright pink; *Adiantum Farleyense,* a very fine variety of Maiden Hair Fern, the best yet introduced, *Croton Irregulare,* a warm green house plant, with long green leaves, spotted with gray; *Croton Interruptum,* similar to the foregoing;; *Caladium,* Dr. Lindley. very fine; thus belongs to a very ornamental class of stove plants, useful for decorative purposes; *Clematis,* a very rapid climbing plant for greenhouse or out-door cultivation, flowering very freely in the summer. Amongst the finest were *Clematis Jackmanii,* the flowers deep rich purple; and *Lanuginosa,* pale lilac; *Coleus Chameleon,* one of the prettiest of this class of plants yet introduced, owing to the many different colors in the leaf. Fuchsia (Golden Tri-color). Sunray—very fine, with distinct foliage. Fuchsia, Miss Arthur—Petals pinkish white, corolla rich carmine. Gloxinias, a very interesting class of plants, with erect and drooping bell-shaped flowers, of which Gloxinia Alice is very good, with flowers carmine and white. Geraniums, double white. Aline Sisley—the best of the double white yet introduced; also the Princess Teck, double, very fine scarlet, of free habit; the Jewel, a very fine double of the nosegay section, with miniature foliage, flowering very freely, bright scarlet, and the La Nigre—habits similar to the last mentioned, flowers deep and purple, and quite distinct in color from any other variety. Of single geraniums there were shown the Cyclops, Duchess de Montford, Iago, Dr. Murret, La Pere Hyacinthe, Masterpiece, and Louis Vallot.

Of Palms—a very interesting and handsome class of plants, for table and conservatory decorations, there were shown the *Areca Lutuscens, Corypha Australis,* and *Latania Borbonica,* also, *Retinospora Plumosa*—a very ornamental shrub, and, *Retinospora Plumosa Aurea,* similar to the above, the leaves tipped with gold.

In addition to the foregoing new plants exhibited, a number of others have been introduced into the city, which will doubtless be shown at the exhibitions of the present year, and amongst which we may name, *Aucuba Japonica, Begonia Folioso, Begonia Splendens, Begonia Richardsonii, Begonia Fuschioides Alba, Begonia Wiltoniensis Alba, Begonia Pernelli,* and *Begonia Marquese* of Nedailac. Also *Guaphalium Aureum,* variegated; *Glaccum Cornucalatum,* and Double Lobelia *Pumela Grandiflora.*