

he informed me the first week in January he has seen scarlet camellias growing out of doors in full bloom in the south of Ireland. I have no doubt many of the plants above named would grow out here just as well as in Ireland; I myself intend to try some of them. I began last autumn with the veronicas, which in a few weeks will be covered with bloom spikes, and do not appear to have suffered in the least from their change of quarters. *Escallonia rubra* thrives well here.

Upper Norwood.

A. H.

## A RAINBOW OF FLOWERS.

BY GEORGE GORDON.



EXACTLY eight years since, the editor of the *Gardener's Magazine* propounded, in the pages of that journal, a scheme of colouring by which the rainbow may be imitated with leaves and flowers of bedding plants. It excited at the time a considerable amount of attention and criticism amongst the principal flower gardeners, and a brief reference to it may perhaps prove interesting to the readers of the *FLORAL WORLD*. The principal difficulties in carrying out a scheme of colouring so bold in its idea and novel in its features were pointed out at the time. Chief amongst these were the large space required for producing a distinct effect; the green ground instead of the heavenly azure or dull leaden ground in which the rainbow is usually set; and the limited number of plants suitable for the reproduction of the rainbow, as nearly as may be, in true colours and true proportions. The difficulty of providing the space still remains, but the others are practically removed, for during the last few years so many new plants suitable for bedding purposes have been introduced that we have a much wider range of selection, and in some of the new lobelias we have just the colour for producing a proper setting for the rainbow.

The idea of a rainbow might be modified to suit a green ground, and a series of blending colours and intermediate shades arranged in semicircular lines could be disposed so as to have a rainbow-like effect upon grass without being, or professing to be, an exact imitation. But it will, of course, be necessary, if an exact imitation is attempted, to have a groundwork of the proper colour. A broad border planted to resemble the rainbow would also be most effective, and the requisite groundwork could be obtained by planting a broad band of lobelia or a dwarf ageratum in the front and a band of tall ageratum of the requisite width at the back; to do this well a very broad border will be required, and it will certainly be better not to think of a blue ground at all and to confine our attention to the production of a rich scheme of colouring on the grass.

But let us consider the planting of the rainbow, and the next

task is to colour it correctly. The real rainbow consists of many more shades of colour than have ever been counted, because all the colours are in transition, the central band of each being most pure and intense, and thence each way it shades by fine degrees into the colour that adjoins it. This fine shading could not, it need hardly be said, be imitated with bedding-plants, and we must take for the basis of operations the popular doctrine that the rainbow consists of seven colours only. Having determined this point it follows that we must settle the relative proportion of these colours. In the real rainbow they are disposed in the following order:—1, red, 45 parts; 2, orange, 27 parts; 3, yellow, 48 parts; 4, green, 60 parts; 5, blue, 60 parts; 6, indigo, 40 parts; 7, violet, 80 parts, in all 360, the breadth of the bow.

Now supposing we have to adopt the same proportions and consider all the figures as inches, thus then the bow is to be 360 inches or 30 feet wide. On this scale the space necessary would be very great and the number of plants required simply enormous. It will be necessary to have the bow considerably broader in proportion to the length of the chord than is the natural bow, for the simple reason that as we cannot plant ribbon-lines from horizon to horizon we cannot give it breadth enough to be visible and practicable unless we depart from the scale on which the bow is produced naturally.

From calculations carefully made it appears that the following are good proportions; that is to say, proportions to which the planter can adapt his work without difficulty, and proportions which are likely to prove satisfactory when viewed in a garden scene. For a quarter-inch scale the bow will be  $7\frac{1}{2}$  feet wide, and the chord will be 105 feet in length, measuring from violet to violet, or 120 feet from red to red. By drawing a bow with the aid of pencil and compasses exactly to these proportions, it will be seen how admirably it is adapted for forming a ribbon boundary to a semicircular lawn in front of a house, or to give a semicircular outline to a lawn facing the drawing-room windows where there happens to be clear space enough for drawing it complete without trees and shrubs interfering.

A very good scale would be three-eighths, this would give  $11\frac{1}{2}$  feet for the breadth of the bow, that is from red to violet, and 180 feet for the length of the chord from red to red; to carry it out the inner and outer boundaries should both be struck from the same centre, and when the bow is cut the breadths for the several colours should be marked off with pegs, and these pegs left in the ground, so that at any time they could be referred to to see if any one colour was encroaching too much on another.

Supposing that we have the bow marked out, it is necessary to at once consider what we are to plant it with. As it is practically impossible to provide the blue ground, for on the lawn there is not room for it, we must consider the planting in relation to a green ground. Even with the greater abundance of material at the present moment it requires a considerable amount of care and knowledge of bedding-plants generally to select them without incurring a risk of failure. It is of the first importance that for

this work the plants should be as nearly as possible of one height; but no one class of plants will furnish us with the proper colours for completing the scheme.

A scale of three-eighths would be in every way suitable, but to avoid mistakes, and to render it unnecessary to take into consideration fractional parts of an inch, we will now assume that the bow is to be formed and planted on a quarter inch scale, and it will therefore be simply necessary to divide the proportions of each colour by four and we have at once the width in inches to be planted with each colour. Thus the red band, No. 1, will have to be (without taking the fractions into consideration) eleven inches wide; the orange band, No. 2, seven inches wide, and so on. No. 1 must unquestionably be a band of geranium, but the difficulty consists in selecting one that is not too bright in colour, for a brilliant scarlet is not desirable; the hue of Beaton's Indian Yellow is the nearest approach to what we require, but in Violet Hill Nosegay we have a variety which is certainly preferable in point of habit and freedom of flowering, and the colour is not too bright to prevent its being used. Therefore let No. 1 band be formed with Violet Hill Nosegay, or Memnon; and as it is important to cover the ground as quickly as possible, a double row of plants for a band on the scale determined upon above is desirable.

For band No. 2 we require an orange, and the colour of the flowers of Stella, or Charley Casbon is an orange scarlet, but the juxtaposition would amend that, and the slight tint of purple in No. 1 would bring out the orange tint in No. 2. The band will be seven inches in width, and a single row of plants will be ample. Then the third band may be formed with a calceolaria, and the choice lies between Aurea floribunda, Gaines' Yellow, and Golden Gem, and the one to be preferred to all others is the last on the list, for it flowers more continuously, and stands bad weather better than either of the others; the least to be preferred is the first-mentioned, which suffers so severely when exposed to adverse influences. If there is any difficulty in obtaining a stock of calceolarias sufficient for the purpose, the showy *Tagetes signatis pumila* may be used; but unless the seed has been saved with special care from the dwarfest plants, and the soil moderately poor, the plants will grow irregularly, and a portion may not bloom satisfactorily, and the effect of the whole scheme be marred in consequence.

We approach a real difficulty when we come to the band of green, which must be fifteen inches in width. Apart from the difficulties of obtaining plants with foliage of the proper tone of green, and the incessant labour necessary to keep the flowers under, it will be found that the green band would split the bow into distinct halves. To get out of the difficulty and avoid the risk of spoiling the scheme, we must take an anti-meteorological view of the case, and take advantage of some other colour, or omit the band altogether. White would do, but it is not desirable, and grey would be preferable. If the latter is determined upon, *Cineraria maritima* would be the best plant to select, as it is not too decided in tone, and with but little trouble can be kept down to the desired height. A

band of bronzy red would produce a more pleasing and satisfactory effect than any other colour, and the best plant for the purpose would be *Coleus Verschaffelti*. *Iresine Lindenii* is a trifle too dark, but it would answer admirably, for it is free growing, hardy, rich in colour, and can be kept to a proper height.

The band No. 5 is blue, and should be of the same width, namely, fifteen inches, as the preceding. The colour afforded by *Lobelia speciosa* is most appropriate, but the plant does not attain a sufficient height, and I propose to substitute for it *Ageratum Imperial Dwarf*, which can be depended upon for continuing in full bloom throughout the season.

For the sixth band, which should be twenty inches in width, the rich colouring of *Viola Blue Perfection* would be most suitable, but most unfortunately the plant does not attain a sufficient height, and would be hidden from view by the other things. We shall have to fall back upon *Purple King Verbena*, or *Jersey Beauty Heliotrope*, the latter being probably the best because of its flowering more freely, and continuing in bloom in unfavourable weather.

In the rainbow the last band of colour is violet, but here we have a green ground, and, moreover, it will be found that violet will be too heavy, and that some proportion of red in it would make it balance better with the first or outside row. We have now to consider what flowers may be employed, and there can be no doubt that a geranium will be found of the most value. There are several varieties that would answer admirably, but none appear so thoroughly well adapted for the purpose as *Lady Kirkland*. Or, what is better still, we might have a single row of *Hibberd's Feast of Roses*, and to form a boundary outside a single row of *Waltham Seedling*, so as to shade gently from the blue to the crimson, and at the same time form a proper balance with the front rows. It appears that this would be very rich planting indeed, and would be a wonderful change from the diamonds, the crescents, the stars, the full moons, and other forms, all good enough in their way, but so common as to make one feel tired of them, and desire a change.

A rainbow, coloured in part with leaf plants would, in some respects, be more satisfactory, as it would be rich in appearance from the first, and the plants could all be kept down to the desired height. But we are faced with the difficulty that we have no plants with leaves of the proper tone of red for the first row. We might, perhaps, have one of the golden-leaved *Coleus*, *Queen Victoria*, for example, which at a distance has a reddish hue, but after much consideration, it appears that *Alternanthera paronychioides* is the most desirable, although its foliage does not present us with the proper tone of red. The remaining bands can be planted as follows: second band, *Geranium Sybil*, a very dwarf-growing variety, belonging to the bronze zonal section; third, *Golden Feather Pyrethrum*; fourth, *Coleus Verschaffelti*; fifth, *Viola Enchantress*; sixth, *Lobelia Brilliant*; seventh, *Viola Perfection*. To form a balance with the first and middle bands a row of *Coleus Verschaffelti splendens* may be planted.

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