

Sultan, and their fragrance is deliciously sweet. Since also they have received the hybridist's attention we have a rich assortment of colours, larger flowers, and a stronger habit of growth. It is to Mr. Eckford that much of the credit is due, as by careful selection he has raised a strain of flowers that are of unusual beauty. Scarlet Invincible, Butterfly (white and lavender), Beatrice (carmine-rose), Princess of Wales (mauve), Imperial Blue, and a few of this type are the finest of the Sweet Peas. It is scarcely necessary to suggest a use for this fragrant flower in the garden. Its graceful habit and freedom of blooming point this out. If there is an unsightly spot to be hidden, a flowery screen can be made with it, and a row or two should certainly be allotted in the reserve garden, where we look for the flowers for cutting. A sowing may be made in March in the open ground. The staking of the plants and other matters of detail need no comment, except that the seed must not be sown so thickly that a severe thinning out has to take place. Sometimes in the press of work this is neglected; the plants grow weakly, and though given plenty of space afterwards never properly recover.

POPPIES during the past three or four years have been grown largely in gardens, and with good effect. The Papavers offer great variety from the gaudy, coarse growing *P. orientale* to the frail and beautiful Iceland Poppy, the former suitable for the border or to form clumps by itself, the other to margin flower beds or to make small groups on the rockery. Papaver orientale is a rich beauty, but it can be used too much. To have a surfeit of such a bold-growing perennial is a mistake. There are now several varieties, bracteatum, of course, being the best known, but Blush Queen, blush-pink, and some of the newer additions might have a trial, though it will be difficult to rival the richness in colour of the type. Nudicaule and its varieties album and miniatum are easily raised from seed sown in the spring, and such annual Poppies as Danebrog, Peacock, Peony-flowered, Carnation-flowered, French, Shirley, and umbrosom are beautiful garden flowers. Of the Shirley Poppies sufficient has been said already in THE GARDEN; they are exceedingly beautiful, both in the shape and colours of the fragile flowers.

NICOTIANA AFFINIS (the Sweet-scented Tobacco) makes an excellent pot plant, and flowers freely in the border. It can be easily raised from seeds sown in March, and makes a quick growth.

SALPIGLOSSIS is an annual that bears a profusion of quaint, variously coloured flowers. It makes a handsome bed, and a mixed packet of seed will give great variation in colour of the flowers, which are beautifully pencilled, as in the *Alstroemeria*. The seed may be sown under glass in March or April, and placed in heat to induce quick germination if the seedlings are required for pots. While under glass keep them hardy and stocky by ventilating the frame whenever the weather will allow of it. This annual was usually grown remarkably well in the Chiswick Gardens of the Royal Horticultural Society. There were long lines of it and also beds, the seed being sown in the open.

LOVE-IN-A-MIST (*Nigella damascena*) should be sown in preference to *N. hispanica*. It is an annual easily raised from seed sown in the spring, and a short row might be sown in the kitchen or reserve garden to supply cut flowers. Though it is not fragrant nor showy like the Sweet Pea, it is a singularly beautiful annual, the bluish flowers nestling in a bed of mossy growth, and suggesting the common English name. It is one of those old favourites that with the increased attention given to hardy plants and annuals has not been overlooked.

NASTURTIUMS or *Tropaeolums* are annuals that always have been grown largely, and are good substitutes for the zonal Pelargonium. Their great failing is that after July is over they quickly lose their beauty, a fortnight or three weeks turning a gay block of colour into a flowerless patch. This was evident in the year 1887, when the trial of

Nasturtiums took place in the Royal Horticultural Gardens at Chiswick. In that memorably hot and dry July the Nasturtiums were at their best, but after that month they quickly lost their former beauty. It is here that the zonal Pelargoniums have an advantage. They show no such ephemeral character as the annuals. A few years ago, when the gardens were worth seeing for the many interesting features of flower gardening, there used to be a long line of a Nasturtium named Bedford Rival, a scarlet-flowered variety, and one of the freest we ever remember. The rich mass of flowers quite hid the abundant leafage. I cannot find its name in the one or two catalogues I have looked through, but it should not be dropped out. Unfortunately, it never came true from seed, and so cuttings were resorted to for perpetuating it. These struck very freely in a little warmth. Last year, of course, can be taken as no criterion of the value of the Nasturtiums. The plants made an extraordinary amount of leafage and produced very few flowers, thus showing what, of course, was well known before, that the Nasturtium revels in sun and a dry soil. As many are now purchasing seeds, it may be useful to give the names of those varieties that proved the best of those on trial in the Chiswick Gardens. Nine sorts were selected, and these were Empress of India, very compact in growth, the flowers rich scarlet; Tom Thumb Pearl, pale yellow; cæruleum roseum, reddish purple; Tom Thumb Beauty, scarlet; Tom Thumb, crimson; Tom Thumb, yellow; and Crystal Palace Gem, yellow, blotched with crimson. To amateurs who have no glass, the Nasturtiums, both dwarf and climbing kinds, are of immense value. They are as showy as bedding plants, and easily raised from seed.

CORNFLOWER (*Centaurea cyanus*).—The Cornflower has been used in many beautiful arrangements in the flower garden. Its lovely blue flowers can be worked into the choicest wreaths, bouquets, or posies, and the plants can be easily raised from seed if this is sown in the open ground in April. If it is desired to have extra strong plants and early flowers, a sowing should be made at once under glass in heat and the seedlings potted on. Harden them well previous to planting out. The bright blue variety should be grown in preference to the rose, purple or striped kinds, but the white is indispensable. A sowing should be made in an odd spot for the supply of flowers for decoration to prevent the plants in the flower garden being spoilt by continual cutting. As we are mainly dealing with annual flowers, it is almost out of place to mention the perennial *C. montana*, but we do so to bring it into notice. It and its several varieties flowered magnificently last year.

MIGNONETTE should also be sown in quantity, as it is always in demand for the drawing-room. *Reseda odorata pyramidalis*, one of Messrs. Vilmorin's strains, is a splendid type, the spikes strong, bold, and the flowers very sweet. A bed of standard Roses, where there is unfortunately any of these in the garden, may be made less ugly by a carpet of Mignonette. Clumps in the border, by the margin of the shrubbery, or a bed wholly devoted to it will not be too much of a flower everybody loves.

Clarkias, Candytufts, Night-scented Stock, Godetias, and Viscarias are a few more annuals that are of unusual beauty when grown properly, which, unfortunately, in many gardens is not the case. A row of the Night-scented Stock near the windows of the principal rooms will exhale a pleasant fragrance in the evening when the flowers are fully open. C.

The blue Primrose.—Mr. Douglas exhibits his customary generosity of spirit and large-heartedness in his recent reference to my blue Primrose. Nothing can be more unfair on the part of members of the floral committee than to declare they have quite as good at home as the subject exhibited before them, and thus discount the greater honesty of other members who regard this, that, or the other as a distinct and beautiful novelty. As I shall exhibit the Primrose again at the meeting on the 12th inst., I invite Mr. Douglas or anyone else to bring

up those they have at home and let the committee accept no man's declaration, but judge for themselves.—A. D.

GARDEN FLORA.

PLATE 691.

THE SOCOTRAN BEGONIAS.

(WITH A COLOURED PLATE OF B. JOHN HEAL.*)

WHEN *Begonia socotrana* flowered for the first time in England in 1881, its probable usefulness as a garden plant was at once perceived. Botanically, this species is interesting from its occurring in such an out-of-the-way place as the island of Socotra, thousands of miles removed from the haunts of any other known *Begonia*. It also possesses characters of an exceptional kind in the form of its tubers, of its foliage, and the persistence of its flowers.

In THE GARDEN, 1882 (Vol. XXI., p. 162), a coloured plate of *B. socotrana* was published, and it was then stated that, from the wide difference between the characters of this and the Andean species of *Begonia*, a cross between the two, however desirable, seemed at least doubtful of achievement. No cross had been effected between the evergreen and tuberous kinds, nor yet between the latter and the South African tuberous species, of which *B. caffra* is an example. The distinct *B. Martiana* (*gracilis*) has since then been crossed with one of the



Begonia socotrana, showing habit of plant.

Andean seedlings, notably by Mr. Cooper, gardener to the Right Hon. Joseph Chamberlain, M.P., in whose garden some distinct and pretty hybrid *Begonias* have been raised. However, nothing is so likely to happen as the unexpected, and in the pretty *Begonia* figured in the accompanying plate we have the first undoubted hybrid raised from *B. socotrana* and one of the Andean seedlings.

B. socotrana, illustrations of which we here give, was discovered by Professor Bayley Balfour in the island of Socotra in 1860, and he sent a few bulbils of it to Kew, along with other plants collected in that island and at Aden. A batch of about twenty plants of the *Begonia* was raised. These flowered in the winter of 1881, when a figure was prepared for the *Botanical Magazine* and for THE GARDEN. The plants then passed into the hands of the Messrs. Veitch, who distributed them the year following. But *B. socotrana* has not become popular in gardens, notwithstanding its many excellent

* Drawn for THE GARDEN in Messrs. Veitch's nursery by H. G. Moon, November 20, 1888. Lithographed and printed by Guillaume Severeys.



BEGONIA "JOHN HEAL"

qualities as a winter-flowering plant. At Kew it has continued to be grown in quantity, and during mid-winter its bright rosy flowers are very attractive. It is easily grown, is dwarf, the leaves are a healthy green, and it blossoms very freely, the flowers lasting several weeks. Cut and placed in water they have been known to keep fresh more than a fortnight. Unlike all other Begonias, this species retains its flowers even after they have withered, a character which cultivators of Begonias well know how to appreciate.

The success of the Messrs. Veitch in plant-breeding has been most marked, not only amongst Orchids, but in almost all horticultural departments in which hybridisation has been effected. Mr. John Heal, to whose skilful manipulation we owe many beautiful seedlings and hybrids, and to whom we are indebted for the following particulars, fertilised the flowers of *B. socotrana* with pollen from a tuberous variety called Viscountess Doneraile, and obtained as a result one seedling. This flowered in 1885, and was named John Heal. It was awarded a first-class certificate at South Kensington in the same year. All the plants distributed under this name have been raised from cuttings of this one plant, as, curiously enough, no female flowers have been produced by this hybrid, so that seedlings of it have been impossible. Mr. Heal suggests that no doubt the absence of female flowers accounts for the length of time the male flowers remain on the plants. He also states that after exhibiting the first plant at South Kensington he cut off all the flowers and kept them in water till the next fortnightly meeting, when they were again exhibited and were quite fresh. This suggests the usefulness of the flowers in bouquet-making and for vases, &c.

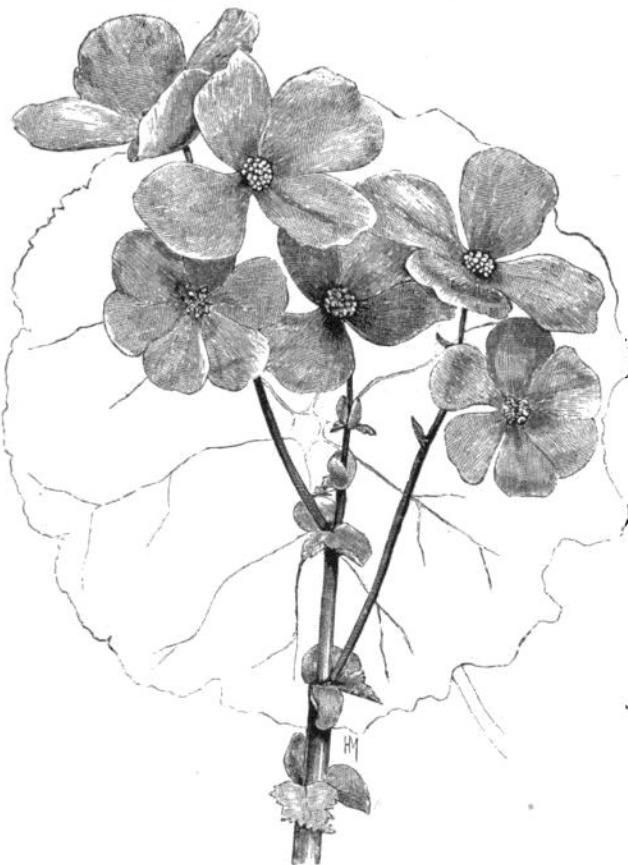
In habit *B. John Heal* is intermediate between its two parents, attaining a height of about 9 inches, branching naturally and freely, the leaves obliquely heart shaped (not peltate, as in *B. socotrana*), and bright green. The flowers are borne loosely on graceful peduncles well above the foliage, every stem developing flowers. Strong plants bear as many as twelve flowers on each peduncle; they are about 1½ inches in diameter, elegant in structure, their colour being bright rosy carmine. Each flower continues fresh about eighteen days and then shrivels. No stakes are required for the support of the plants, which is a relief to those who know what a disfigurement stakes often are in the summer-flowering Begonias. The plants commenced to bloom in the second week of last September, and were gay with flowers till the middle of January. In gardens away from London some plants bloomed up till the middle of February.

B. Adonis was Mr. Heal's next success. This was the result of fertilising flowers of a large-flowered Andean variety with pollen from *B. John Heal*. *B.*

Adonis is more robust than *B. John Heal*, the foliage being larger, and the flowers, which are all male, are almost as large again, or 3 inches in diameter; they are of a pleasing soft rose colour, paler towards the centre, and arranged on graceful arching peduncles. This variety was certificated by the Royal Horticultural Society in 1887.

B. WINTER GEM is the best of the trio, and is a most beautiful flowering plant, possessing all the attractions of the best of the Andean race, with the useful habit of flowering in winter. It was obtained by hybridising the flowers of *B. socotrana* with pollen from a crimson-flowered Andean variety. In habit it is not unlike the first-named parent, but it is more compact; the peduncles are not so lax, and the flowers are large, of good substance, and of a deep carmine, almost crimson, colour.

No doubt these three hybrids will form the nucleus of a race of Begonias which is certain to prove of the greatest possible value. The accomplishment of this is now only a matter of time.



Begonia socotrana, showing flowers and leaf.

We have already several very distinct and useful races of Begonia, viz., the Rex section, a glorious race of ornamental-leaved plants now very much neglected; the tuberous or Andean section; the semperflorens section, a group which promises to soon become valuable for the stove in winter—indeed, we have already several first-rate flowering plants in this section; the octopetala section, the first of which was lately figured in THE GARDEN (see p. 125); and the Socotran section. We are gradually finding out the immense value of many of the Begonias as garden plants.

The culture of *B. John Heal* and its two allies is simple enough. The plants go to rest as soon as the flowers are over, and they remain dormant till July, when growth recommences. The tubers are then shaken out of the old soil

and repotted, 5-inch pots being used, and one tuber is placed in each pot. The soil should be the same as that used for ordinary Begonias. If a stock is wanted, the shoots, if removed and treated as cuttings as soon they get long enough, will soon root, and make nice flowering plants the same season. Even the smallest plants bloom when the flowering time arrives. A warm greenhouse or intermediate house suits them, and they should have all the light possible. W.

FRUIT GARDEN.

W. COLEMAN.

THINNING GRAPES.

RESUMING my remarks (p. 161) upon judicious thinning not only for quality of fruit, but also for the preservation of the health and vigour of the tree, I may say there is not under high cultivation a single genus which does not require this attention. It is not a little amusing, when turning over the pages of an illustrated catalogue, to find the chief recommendation of some particular fruit centred in its extreme fertility; in the tree's ability to set in one spring as much fruit as any sensible man would allow it to carry to maturity in twenty years. Without going out of my way, I will take the Kelsey Plum, figured the other day in THE GARDEN, as an example. It may be a very good variety and worthy of extensive cultivation in this country, but its great fertility does not enhance its value, as we frequently see the Victoria, the Pershore, and other Plums quite as thickly studded, whilst some of the Damsons completely break down with the weight of fruit clustering upon their twigs and branches. Peaches, again, sometimes set two or three dozens of fruit on shoots 2 feet in length, and half a dozen on a single spur, but no good gardener thinks of accepting Nature's lavish gift; therefore, he reduces the crop to an extent that will ensure quality and maintain the vigour of the tree. This wonderful fertility is met with every year both under glass and in the open air, and as many people take this great willingness as an extra quality, a few seasonable hints may not be lost upon those given to over-cropping. The thinning of bush fruits is hardly ever practised, and yet we know quite well that half the quantity would result in equal weight and finer quality, whilst over-cropping in old orchards has been of the greatest benefit to our colonial rivals.

Grapes, again, now grown by thousands of tons, must be up to the highest mark, otherwise they are quite unsaleable. Sound, healthy Vines which have not been over-cropped in preceding years frequently show about six times the number of bunches they should be allowed to carry to maturity, and set best when at least three-fourths of them are taken off before the most forward come into flower. Indeed, so fruitful is the Vine and so unwilling the hand of the chef, that in many instances the most careful over-crop and repent at leisure. It is impossible to say how many bunches a Vine should carry to keep it in healthy vigour, for we must not overlook the fact that under-cropping, next to over-cropping, if possible, should be avoided. Some Grape growers make a start by reducing the clusters to one on each spur, but this is a very heavy crop indeed, and out of all proportion to the foliage, no matter how good and plentiful it may be. Therefore, in the case of free setters, one-third of these at least should be removed, if not before, certainly so soon as they are out of flower and the best clusters can be decided upon. The great tendency on the part of young beginners and