

# FLOWERS AND GARDENS.

## Pleasures of Gardening.

“Gardening has been the inclination of kings, the choice of philosophers, the common favourite of public and private men; a pleasure of the greatest, and the care of the meanest; and indeed, an employment and a possession for which no man is too high or too low.”

SIR WILLIAM TEMPLE.

## A little talk about Gardening.

**I**F you were to receive a letter, the envelope of which was dirty, torn and disreputable, would you not feel disgusted? And would your disgust disappear entirely if, inside that dirty envelope, you found a letter written on dainty, scented paper?

At least, you could not get over the incongruity between the covering and its contents. In the same way, only to a much greater degree, does one feel the difference of attention bestowed on the outside and on the inside of many of the bungalows in which we live in India. Let us, then, try to make the exterior of our houses a little more in keeping with the interior, let the beauty of the garden harmonise with the dainty taste of the drawing-room.

The general excuse all over India is—

“Oh! but we may be here such a short time, so what is the use of bothering?” Yes, we are all moved about more or less, but, if on Virgil’s principle—“Sow you, not for yourselves”—each of us improved the look of the ground outside our doors, and did even a little gardening, we should leave behind for our successors in one station only what they would have got ready for us in the other to which we are transferred, so, you see, we should give no more than we mean to take! Well, now

that we are agreed the outside of our dwellings shall not illustrate the well-known lines—

“ I passed by his garden and saw the wild brier,  
The thorns and the thistles grow broader and higher.”

let us set to work and make a beginning. Decide how much of your ground you can afford to cultivate as a flower garden, then you will find the love of gardening grow upon you, and you will by-and-bye want to enlarge your boundary, so it will be best, at the very first, to leave a margin of ground for this after-enlargement. At the same time mark where your lawn, shrubbery, rosary, etc. are to be, and clear these places as recommended under those heads. The time to do all this is in the hot weather when little else can be done.

#### Laying out the Ground.

WE must do this in the *quickest*, the least expensive and the simplest way.

Let us see whether there is any ground to make a garden and then let us “clean up” round the house *first*. One or two coolies must be got to clear away every bit of grass and weed from ten feet of the ground round the house—uproot, scrape, or hoe it all away, and then smooth over, and level with the hand or a rammer all the surface of the ground that has been so cleared. Next cover this ground with the powdered brickbats called “*soorkee*,” or, better, with gravel, if available. If you sprinkle the ground with water before and after laying the *soorkee* it will stick all the better. The next step will be the lawn.

#### A Lawn, an absolute necessity.

THE shape and size of this will depend very much on how your carriage-drive lies. Many houses have a carriage-drive straight from the road to within a few yards of the front of the house. The road then divides and forms itself into a semi-circular loop to the right and to the left, uniting under the porch, or if there is no porch, at the

front door. It is much too expensive to make a new carriage-drive, so, however it may go, we shall leave the drive alone and first attend to the circular, semi-circular, pearshaped, oblong, or square bit of ground which it surrounds, just in front of the house. Most probably it has a high *mehndee* hedge, enclosing the inevitable "mali's" patch-work garden. A crowding up of innumerable little patches of plants, with pathways, nine inches wide, intersecting the arrangement with painful precision. Now, if you decide to let that eyesore remain where it is, then you need not trouble to read any more of this manual! Stay, we have already agreed to *improve* our outside surroundings, so there is no objection to taking away the mali's patch-work garden; but, before we do this, let us see whether it is

#### A suitable time of year

FOR beginning a proper garden. From June to February is the best time for gardening. But March, April and May may be occupied in many little directions mentioned further on. We will consider that you have decided to begin your garden in June. If the front of your house has an enclosure like that described above, it must be cleared away. *It really must!* If you leave it as it is, the effect of whatever else you may do will be entirely spoiled. The beauty of the finest picture would be greatly marred if it were badly framed and badly hung; in the same way, the beautiful effect of your flowers will be lost if you don't place them where they can look their best. So, as it is a good time of year, let us clear away the ground in front, level it, and plant it with *doob* grass, in the way described further on. See what is best amongst the plants you are clearing away, and reserve them for other places, such as

#### Shrubberies and Side-walks.

As we are going to have a garden only on a small scale, and as I cannot in a small manual like this give you any

diagram, you must decide for yourself where you are going to have your lawn (I have said a lawn is an absolute necessity !), then, on either side of your lawn, have a shrubbery for massing plants that grow from three to ten or fifteen feet high. When you have decided where you will have these, then from the space you have cleared in front, transplant anything you think worth keeping. If there is a *mehndee* hedge encircling the mail's patch-work garden, this hedge must be taken up and planted somewhere at the back of your house, or in any convenient spot that is well shaded and not conspicuous, because this is where you are to have your

#### Work-yard Enclosure.

You must have this sort of shut-in place to do all your work of seed-sowing, transplanting, and general messing. Mixing of soils is very messy work ; and broken flower-pots and withered leaves, which you will find most useful, must be stowed away in this workshop enclosure or *kar-khana*. If you have no *mehndee* hedge to clear away, some sort of thatch, just temporarily, will do, until you decide with what sort of hedge you will screen your *kar-khana*. Now let us go back to the space you have cleared. Stand at your front door and look at the ground spread just before you and imagine how nice it would be if you had an emerald green sward to rest your aching eyes upon—open, clear from all obstruction, so as to give you fresh sweet air to breathe. Then turn your eyes to the left and to the right and imagine beds and banks of sweet bright flowers, that "solace for humanity" as Ruskin calls them, and you will, I'm sure, be quite determined that such enjoyment *shall* be put within your own reach and that of your friends.

However large or small the immediate space just in front of your house may be, grass it over and have the carriage-drive sprinkled with red *soorkee*, or gravel. If this is to be your only lawn, then let your shrubberies lie on the outer sides of your carriage-drive, leaving eight or nine feet of space all along between the carriage-drive and

shrubbery for the massing and arrangement of flowers only. So if you stand on the grassy space in front of your house, the arrangement on each side will be, red or grey carriage-drive, bordered all along with a flower-bed eight or nine feet wide, composed of flowers, and this flower border banked up with a background of shrubs and foliage plants. Even this small extent of gardening will be a "joy for ever." As you read to the end of this manual you will see what you can have in bloom from one year's end to another. Let creepers twine round the pillars or posts of your porch, if you have a porch, but not so as to shut out the air or the view. Let flower-pots stand along the edge of your verandah, if you have a verandah, and along the nice ten feet of clearance, that first act of yours to "clean up" the outside of your house. There are no end of pretty creepers recommended to you, but these must not be trained anywhere on to your roof, or your walls, for three reasons: first, creepers on a house provide harbour for snakes (oh, horror!); second, creepers obstruct ventilation and harbour mosquitoes (again, horror); third, nothing makes a house look more untidy than draggled, unkept creepers. So, please, grow your pretty creepers where they will be a pleasure—not a pain.

### **Mali.**

THE expense for keeping up this small garden will vary according to the local rate of pay for such labour. In populous centres, where industrial and other concerns employ many hands, you may have to pay fifteen or even twenty rupees for a mali, and then you will probably have to train him.

If you keep a house bhistic and a grass-cutter, give the former an extra two rupees for watering your grass-plot every evening, and one rupee per month extra to the latter for cutting your grass-plot once a week with the shears you will provide for him (see "Garden Tools"), and keeping your carriage-drive free from weeds. Any grass-cutter will be very glad of those extra monthly eight annas for doing a few minutes' work every day. Your mali, if

he looks properly after your flowers and draws the water for watering them, will not have time for the work the bhistic and grass-cutter engage to do. If you have rather a large lot of plants, dispense with the bhistic and grass-cutter at Rs. 3 and keep one of the mali's many "bhaies," a *chokra*, on Rs. 5 to help the mali all round. I do not venture to say a word about the culture of vegetables, but as I am anxious we should keep on good terms with the mali, let me advise you to allow him to grow a patch of vegetables on his own account near his hut. The produce of this little patch will realise just enough to compensate him for the disappointment he felt on being engaged to look after a flower garden pure and simple. Malis like to live well (like most persons!), so, though it is a foregone conclusion that your flowers will be stolen, and the deft fingers of the mali's wife will weave them into garlands to sell to the devotees at the nearest temple, your mali will remain a discontented man and not take the care you expect him to take of your flowers, till you give him that vegetable patch for his *very own*, then all will go well. After making this small garden, if you think you will, in addition, venture on a

#### Garden on a larger scale

SAY, a lawn a little larger than a tennis-court, or suitable to hold a garden-party, also a "rosary," or rose-walks and conservatory like what you will find described later on, the expense will then increase by engaging more men, and may be taken to stand thus:—Mali on Rs. 15 a month; three assistants for drawing water, etc., on Rs. 5 each; total Rs. 30. I take it for granted you have a well, or more than one, so your mali's three assistants will make the water-channels to suit all the purposes of watering, and (I hope you won't mind) you will have to make three reservoirs—one in the conservatory, one near your lawn, and one near your shrubbery that borders your carriage-drive. These reservoirs must be made thoroughly *pucca*, of bricks and cement, and so will last for many years. If your landlord is made to understand how much the value

of his property will be enhanced and his ground improved by all you are doing in the way of gardening, he, most probably, will defray the cost of those reservoirs himself, since they will remain his property when you vacate his house.

### Preparing Ground for the Lawn.

HAVE your ground ploughed up, or thoroughly well dug up in the hot weather,—May would be a good month. Let the clods lie open for a few days, to air the ground. Then have the clods broken into small pieces, and all the grass, weeds and roots picked out. Level it as perfectly as you can, raking it over and over again. This will occupy several weeks, but as your men will not have anything particular to do in the garden in the hot weather, their attention can very well be devoted to the making of the lawn, which is to be the chief feature in your garden. Indeed, if you can't make a garden, make *only a lawn*, or grass-plot, and this, with cleanly-kept *soorkee* paths and a few plants in the pots, will be sufficient to keep up the degree of harmony you intend to maintain between the outside and inside appearance of your abode. After there has been a good fall of rain, you will find your ground *settle*, and you will then be able to detect the inequalities of the surface and repair them. Rake over and remove all weeds not observed before.

### Grass for your Lawn

SHOULD be *doob* grass, which is procurable everywhere, at all events near stables. The grass-cutters bring *doob* for the horses, and as they always beat it to free the grass from the earth round the roots, the seeds of the *doob* fall with the earth, and germinate directly the rains begin. I can't in any other way account for the constant supply of *doob* grass to be found growing round about the stables. However, you will get it from any place most convenient. Have it dug up, roots and all, then have it chopped, *not shorter than three inches*. Bunches of it should be put

together by one man and handed to another man to be chopped, bunch by bunch, into pieces *three inches long*. My reason for emphasizing the method of cutting is this,—if the cutter just clutches at a heap and chops away inch by inch, more than half the grass will be destroyed, and this will account for many bare patches appearing, even where the grass has been planted quite as thickly as any other part of the lawn. When your grass is all chopped up, then mix it into a paste of these proportions—two baskets of chopped grass, one basket of earth, one basket of cow-dung, one shovelful of wood ashes. Add as much water as will form it into a consistency thick enough to admit of its being spread on your ground like paste one inch thick. Your mali will call this process *leepna*. If it is not raining, water it with a watering-can. The next day roll it with a *bailan* or

#### Stone-roller.

THIS can be had at any quarry, and the size should be such as one man can pull easily, say, two feet long and one foot thick. A roller of this size, without its iron fixings, will cost you about Rs. 12, according to the distance of the quarry from whence it may be brought. As I am giving only my own experiences and talking to you only about small gardens, you must not be surprised if I tell you that a lawn, about double the size of a tennis-court, is better if watered by the hand than if it were flooded. So, as soon as the rains are over, let your men water your lawn exactly as they water your plants, with a watering-can every evening. You can't have a lawn kept like velvet without a

#### Lawn-mower.

THIS most necessary implement has for years been a crux in lawn-making, the price being prohibitive. Lawn-mowers can be had of various prices from Rs. 40 upwards. They have to be imported from Europe and America, but they *are* available. So now no garden-lovers need sigh in vain for a lawn! Well, when you have got it, please see



that the grass is cut twice or thrice a week in the rains, and at least once a week during the rest of the year. One little bit of advice I must give you here; insist on your mali cleaning the mower when he has done with it, and bringing it into your verandah where you can see for yourself that it *is clean* and where it will be safe from the mali's enterprising children, who can never resist the temptation of using it for their own playful purposes. To avoid ridges in the grass, have it mown first one way, then right across the other way, and immediately the mowing is done, have the lawn *swept up*. Never omit the sweeping up if you wish your grass to have a good colour. The day after mowing, the grass should be well rolled. Paley, writing about grasses, says:—"They thrive under a treatment by which other plants are destroyed. *The more their leaves are consumed, the more their roots increase.*" The last sentence I have put in italics, because I want you to remember that the more like velvet you wish your lawn to appear, the more you must

#### **Mow, Sweep, Roll, Water.**

You may have heard of the American gentleman who was amazed at the wonderful beauty of the lawns of a certain College at Oxford, and enquired what was the secret of their treatment. "Oh, it has been cut and rolled, cut and rolled." The American, expecting to have much more difficult processes disclosed towards the attainment of such perfection, said: "Yes, and then?" The reply was—"Oh! then just go on cutting and rolling for five hundred years, and you will see the result!"

#### **Rosaries and Rose-walks.**

WHERE you have a shrubbery, reserve some space for a rosary, for roses that are climbers and ramblers, like Maréchal Niel, Gloire de Dijon, etc. (*see "Roses"*), look their best where they are not cramped. The dwarfs, or roses that do not grow very high, look best on either side of a walk, with twelve or eighteen inches of space

reserved in front for annuals, and also a six or seven inch border for grass. Along two sides of my lawn I had roses, annuals and grass planted in this manner, with a *soorkee*-coloured walk six feet wide running between, and the result was delightfully satisfactory. I hope you will have plenty of room, so that none of your walks should be *less* than six feet wide. They may be wider, but certainly not narrower. See that your roses get all the sunshine there is; roses that get only the morning or only the afternoon sun will not bloom perfectly. The same advice applies also to foliage shrubs and plants of bright colouring.

#### **Treatment of Roses.**

For each rose-bush, have a hole dug *at least* eighteen inches deep and eighteen inches wide, fill these holes with soil composed as follows:—Two parts common earth, one part leaf-mould, one part old cow-dung (*gobur*) or sheep-dung (cow-dung is best).

Roses may be planted from 10th October to 10th November in the plains of India, and in the hill stations during the months of February and June. If they have travelled a long way, shield them after you have planted them from the mid-day sun only, for two or three days. When you see that they have recovered from their journey, snip off only the ends of their branches. It does not do to prune your newly-planted roses to the same extent as the roses that have been in your garden for years. Your old roses must be treated differently. In the plains change the soil from 10th October to 15th November, the earlier date for the southern parts and the later date for the northern parts of India. In the hills the transplanting is best done before the rains set in, and in the month of February mulching and manuring will give you a second crop of roses during the summer. Open out the roots, remove the old soil, and replace with fresh soil *at once*. I don't at all approve of exposing rose-roots for several days, for in my experience the results have been disastrous.

I tried it in the Central Provinces and in the North-West Provinces, and lost most of my best roses in consequence.

After you have renewed the soil, and your roses have rested for three or four days, prune them well. At this season they must get water every day. In December you will find the buds begin to form, then mulch, that is, *stir up the surface of the soil* and give liquid cow-dung once a week, and continue doing this all the time they are in flower, which ought to be till the middle of March. Through the hot months you need not do anything but water them in the evening. (See "Flowers in the Hills.")

#### Rose Cuttings.

OF course you want a great many rose-bushes, and you don't wish to go to much expense about them. Well, choose cuttings of the roses you like best, twelve inches long, make holes as directed above, but to the soil of each hole add a good handful of powdered charcoal and one of sand; into the middle of each hole sink *four together* of your cuttings, and see that quite six inches of them are well beneath the soil, leaving six inches above. Over these clusters of cuttings that have been planted in full sunshine, you must keep grass cones during the day only, until you see that their new leaves are all well out; then they need no further protection but to be watered. Cuttings put down in October and November, in groups of four, in the manner described, look quite decent shrubs the following year, and much time is saved by planting them in this way from the very beginning just where they are to remain. *Remember the grass cones during the day, else the cuttings will wither.* The rest of your cuttings plant in your "reserve patch." Put these down in lines, each sort in its own line, four inches apart. Climbing roses need not be so much pruned as those which do not climb. (See "Roses.")

#### Articles necessary for garden use.

THE lawn-mower and stone-roller I have already mentioned. You will require a pair of garden shears with

blades nine inches long, in wooden handles, price Rs. 3. All your hedges will need constant trimming, your shrubs will need clipping, and this work can't be done except with the big shears mentioned. Then another most useful kind, a pair of garden spring shears, price Rs. 2. This you can make use of yourself, and if, as I suggested in paragraph "Mali," your grass-cutter is to cut your small grass-plot, this is the best shears he can use, and with this your grass borders must be clipped. For your own use have one large and one small English watering can, price Rs. 3 to Rs. 3-8. For the mali's use, see paragraph "Kerosine Tins."

Galvanized wire netting, two inches mesh, at 4 annas per square yard, is most useful, especially in stations where white-ants abound. Galvanized wire "for horticultural purposes" is sold at 4 annas per pound, and nails of all sizes 4 annas per pound, both *absolutely necessary*. Two things your mali will ask you for are a knife and a pair of scissors for pruning purposes. I have always found it best to let him suit himself with these from the bazar.

Each of your men must have a *koorpee*; for yourself you will want a large and a small trowel and a fork, for you will see that I ask you to look after your ferns yourself. The leading iron-mongers sell all the above-mentioned articles.

Then you will want some baskets, also twine and small wooden pegs and some chalk for marking.

### **The many uses of Kerosine Tins.**

You will smile when you read this paragraph, but in the end you will allow satisfaction to take the place of amusement, for you know we are to do all our gardening in the most economical way.

*Pails.*—Let a blacksmith take off the tops of six or eight tins, fix a band of hoop-iron round the edge of the tins, and then fix a handle of thick iron wire similar to the English galvanized pails.

*Seed boxes.*—Cut some of the tins longwise; as a kerosine tin is about ten inches in diameter, it will give you two seed boxes five inches deep; this is only one and-a-half inches less in depth than the ordinary wine boxes generally used for sowing seed. Have the bottom of these tin seed boxes perforated with four holes half-an-inch wide to admit of drainage. These tin boxes are much less likely to harbour insects and ants than wooden boxes. Have three or four of these tin seed boxes perforated with holes a quarter of an inch square closely all over the bottom, to use as sieves for sifting your soils and your powdered *soorkee*.

*Watering cans.*—Cut off, diagonally, half the top of a tin, have an iron band put round the top similar to that put round the pails. At the open corner have a wire *ring* instead of a handle, at the closed corner have the spout fixed, at the top of the tin have a wire handle (like those on the pails) placed diagonally. When your pails and cans wear out, have the iron work transferred to fresh tins. In this age we are nothing if not economical.

For putting away your different kinds of bulbs, have a few tins with lids to shut down.

Again, these tins may be cut and painted in many ways as *jardinières* and *cache pots*, but one particularly good way is to remove the top of the tin and paint it all over with black japan (Re. 1 per bottle), which dries instantly, then on the four panels paint some simple design—grass, butterflies, etc., etc., with Bessemer's gold paint (Re. 1 per bottle); this also dries at once.

As a stand for your black and gold tin, have a crate made exactly like four Oxford picture-frames joined to form a square. It may be made of any wood; at the four inside lower corners let there be small ledges to support the tin. Gild the frame with Bessemer's gold paint, and put your tin into it. Improve upon this idea for keeping pots in drawing-rooms, verandahs, etc. Odd pieces of tin will be required for your fern-boxes, etc. (See "Ferns.")

### Conservatory

Is a grand word, but by using it I don't mean to conjure up visions of expensive glass-houses, and frighten you out of the hope of having one. No, you can make a beautiful conservatory without a single pane of glass. If you are fortunate enough to have one, two, three, or half-a-dozen big, shady trees, such as mango, jaman, loquat, or any trees that retain their foliage all the year round, there you are already provided with the roof of your conservatory. If you have a great many trees to choose from, select a group within view of your lawn and easy of access. If I tell you about my own conservatory and how I made it, you will more easily understand how to set about making your own. Well, on the furthest side of my lawn I happened to have one mango and four loquat trees, growing just so far from each other as to form a shade on an area of ground forty by thirty feet. Along the north and south side of these trees I put up screens of bamboo trellis, seven feet high and forty feet long, secured to poles driven into the ground at distances of six feet. To the east, facing the lawn, I left the entire side, thirty feet, quite open (*Note*—Ferns like early morning sun), so that from the lawn there was a pretty view of the interior of the conservatory. The west side, too, had the same height of trellis screen with an arched doorway. This arched doorway, though it faced the west, did not let in the afternoon sun, because fifteen feet away from the doorway was another trellis, which screened off the sun all the afternoon. These enclosures were made in May, and as soon as the rains began I planted ipomea and quisqualis (*see* I. and Q.) along the outer side of the trellis, and very soon it was entirely covered with green. Next came the making of rockeries and ferneries. These were in different forms against and around the trunks of the trees, all stereotyped regularity being avoided. In one corner of my conservatory, on the side nearest the well in the garden, I built a *pucca* reservoir, four and-a-half feet square, and three feet deep. To hide this reservoir from view, I built on the edge of two sides of it two feet of wall with

a flat top. On the top I keep pots of all sorts of pretty things, which are changed in their season, and against the wall, hiding it completely, is a fernery bordered with saxifrage and *Pilea muscosa* (see S. and P.). In the other ferneries I have kerosine tins (which were first tarred inside and outside to preserve them from rust) sunk here and there and kept filled with water, so that the evaporation may increase the moisture for the plants. You will notice I make use of two words fernery and rockery. Of course rocks are used in the formation of both, but as mine is an open air sort of arrangement, in the ferneries I put nothing but ferns, and in the rockeries there are palms, lilies and foliage plants of sorts, some of them in pots sunk between the rocks, so that they can easily be changed in their seasons. Hanging baskets made of wood, wire, moss, etc., hang from the branches, and to make perches for hanging things on, some stout bamboos are placed across here and there neatly tied into the forks of the trees. The pretty drooping grass (see "Grasses") clothes the trunks of the trees, while ivy, *Pilea muscosa*, and saxifrage creep into all vacant spaces and thrive most comfortably. All the ground in this conservatory is raised a few inches above the level of the garden, so that water should not lodge here. It is kept scrupulously free from weeds, and an occasional renewal of the *soorkee* gravel makes it bright and clean. The plants here are all watered twice a day (except when it rains), morning and evening, with watering cans. This does not take long to do, as the water is close at hand in the reservoir. In the hot months, the grounds of this conservatory, as well as the plant, are watered twice a day. Rustic stands of different kinds, with pretty boxes of ferns, canes, etc., stand everywhere, leaving plenty of room to move about. I must tell you that the palms, canes, ferns and eucharis lilies remain in this place from one year's end to another. It is only such things as crotons, coleus, caladium, etc., that are removed hence when they are at rest, or the weather is too frosty. The rocks or stones, of which these rockeries and ferneries are formed, are chiefly large and

small lumps of brick refuse from kilns and of irregular blocks of *kunkur* from quarries. The brick refuse being porous retains moisture, and *kunkur* is what ferns take to most kindly. The great knots of gnarled bark formed on trees by parasites, and called by the natives *bandha-kagirra*, form excellent receptacles for ferns, and white-ants do not find them palatable. In the rockeries I used leaf-mould. In the ferneries, soil prepared for ferns. (See "Ferns.") For two years the bamboo screens round this conservatory stood very well, but at the end of that time all the creepers collapsed owing to white-ants having completely destroyed the posts and all the bamboo trellis. However, at a very small expense, I built up brick pillars eighteen inches square and seven feet high, at distances of six feet; tarred poles were connected from pillar to pillar, quite on the top, and to these I nailed wire netting three feet wide. (See "Articles for garden use.") The fallen creepers were helped up to the netting with stout twine, and in a few days the screens were better than ever. This creeper-covered screen being only seven feet high admits plenty of light and air from the top, but it keeps off all the *hot winds* of summer and the *cold winds* of winter, and experience has taught me that it is the *hot winds* more than anything else that destroy delicate things in the plains. In this open air conservatory, which has the partial shade of trees on the top and which is protected at the sides from the hot winds by that dense screen of creepers, the ferns in the trays and the ferneries remain from year's end to year's end *in all weathers* and thrive wonderfully. Indeed, I can honestly tell you that, even in their mountain habitation, they don't grow much better than they do here. The palms, canes, and foliage plants, too, all grow here happily and healthily in the brightest luxuriance, sheltered from that arch-fiend, the hot wind. Let me persuade you to make even a small conservatory on my most simple plan. The trees, of course, add much to the beauty of this arrangement, and make it appear almost like a glade in a natural forest. If you have no trees, don't despair. I too have been equally destitute, but took care of my ferns, etc., by making a shed twenty



feet square, flat on the top, with a roof of coir-matting which could be drawn aside like a photographer's curtain. This shed had creepers twining round the outer poles, and ten feet away from the shed were trellis screens such as I have already described; but these screens were placed rather zig-zag, so as to dodge the sun and give this conservatory rather a *mazy* appearance. However, the wind was kept out, and my dear plants lived very happily.

### Garden Soils.

ONE of the very first things you must do when you begin gardening is to have a big hole dug by the side of your "work-yard enclosure." Make this hole ten or twelve feet square and six feet deep; the earth dug out of this hole, carry over and store up in one corner of your workshop. Let all the dried leaves, weeds, grass, etc., cleaned up from your compound, be always thrown into this hole, impress it clearly on the memory of your cook's mate (*see* "Baker and Cook") that the couple of kerosine-tin pails kept in your kitchen for the purpose of collecting the solid refuse of the kitchen fireplace,—as the wood and charcoal ashes should be daily and regularly emptied,—the refuse into the leaf-pit, the ashes into your workshop, for you will want the ashes and bits of charcoal later on.

If the knight of the kitchen is fined once or twice for leaving refuse anywhere near your kitchen, he will become oh! so smart in placing that refuse where you so particularly want it! Now you have plain earth, ashes and some leaf-mould getting ready. You want besides cow-dung (or sheep-dung), a small heap of sand, a good big heap of brickbats, and a heap of *kunkur*. This is not the place to moralize, and you may not be particularly interested in the well-being of your servants' children; but allow me to say that, as your brickbats have to be pounded up into *soorkee*, you will help those children to "earn an honest livelihood" if you set them to work and pay them a few coppers for pounding your *soorkee*. If you can possibly manage it, make a channel from the bath-rooms

of your house to the leaf-pit. All the soap water utilized in this way and mixed up with your leaves and refuse will soon give you excellent leaf-mould. If the contents of the pit can be so watered and tossed about in the damp with a pole, your leaf-mould will be ready to use in six months; if not, you must wait for the rains to rot it, which it will do in two years. But if you want to plant your garden out at once, you can buy this leaf-mould (*puh-thee-ke-kâth*) from some native gardener your mali is sure to find for you, if you make it worth his while. Always sift your soils before mixing. If your cow and sheep-dung can be partially rotted before using, so much the better, as it ought not to be used fresh except for surface-dressing where recommended, later on.

#### Seed Sowing.

FOR all your seeds of annuals, use the following mixture of soil: two parts leaf-mould, one part plain earth, and one part composed of half-burnt cow-dung and powdered charcoal. Mix these four parts together, and sift again. (See "Garden Soils.") If you are going to use the seed-boxes of kerosine tins, put a flat crock over each hole at the bottom: if you use wine cases, place two inches of crocks all over the bottom. Fill up your seed-boxes with the prepared soil to within an inch of the top, water gently to enable it to settle; draw furrows across the earth with a pointed stick and sow the seeds in these. The depth of the little furrows and their distance apart is determined by the size of the seed. Large seeds like those of sweet pea and sunflower can be sown half to one inch deep and three inches apart. In dealing with minute seeds such as phlox, petunia or torenia, it is best to mix them with twice their bulk of fine sand, and sift the mixture into furrows one-eighth inch deep and two inches apart. Cover the whole surface of the seed-box at once with another one-eighth inch of fine sand or dust. In all cases some final covering of earth, sand or dust should be given and the surface pressed down by hand. It is much the best plan to sow seeds in lines leaving vacant spaces between, because when the seeds germinate

and the seedlings are big enough to be transplanted, you can stick in your fork or trowel without breaking the tender roots, as you most certainly would, were the seeds sown promiscuously all over the box. Water your seeds the day after they are sown very gently with a *fine rose* to your watering can, continue to water every evening. With the minute seeds mentioned above there is considerable danger of exposing them or washing them out by too strong a shower of water. So break the force of the falling drops by putting feathery leaves, such as gold mohur leaves, over the surface of the soil and water freely on to them.

Keep your boxes where they will get diffuse sunshine from directly overhead all day. One-sided illumination causes seedlings to lean to one side. Too little light makes seedlings weak and leggy. The light shade found under a gold mohur or other feathery-leaved tree is ideal. If it rains, as it sometimes does even at the end of October, bring your boxes into the verandahs, or protect carefully with shelters of matting while the rain lasts, else your seeds will be all washed away! As your seedlings grow bigger, give a little more sunshine. When they are transplanted into pots and into the ground where they are to remain, protect them from the sun for a day or two by sticking in the ground large feathery leaves to cover them partially, and when fully established, let them have all the sunlight possible. You can save seeds of some things, and you can get acclimatised seeds from your nearest public gardens. For English seeds, send to Sutton & Sons, Park Lane, Calcutta, as their seeds can always be depended on.

#### Flower-Pots.

WHEN you have read through this little manual and noted what you wish to have growing in pots, you will be able to form an idea of how many pots you will be likely to require and the different sizes. One thing you must remember, *the potter can't make pots during the rains, so you must lay in your stock beforehand.* You will want them from five to twelve inches in diameter; the five-inch pots are very nice for small ferns and single specimens of

annuals, such as pansies, asters, etc. ; eight-inch pots are suitable for oxalis, balsams, etc. ; ten and twelve-inch pots for lilies, palms, cannas, etc., and such things as you wish to bring inside your rooms. Such shrubs as roses should not have pots less than eighteen inches in diameter. When lilies and caladiums, etc., are taken out of pots, keep the empty pots carefully piled upside down at one side of your work-yard. Always wash an old pot before using again. It will save trouble to order your potter to make holes for drainage at the bottom, when he is moulding the pots ; if not, a good many of the pots will be cracked when the mali comes to drill the holes. According to the size of your pots, you must fill the bottom with crocks from one to three inches before you fill up with soil, to prevent the earth from being water-logged. *Hirmajee* is the native name of the red earth that gives the pots such a bright rich colour. If you don't mind the expense, a little kerosine oil mixed with the earth is better than water, because when the pots are painted with it, grubs and ants are less likely to creep up. The smell is objectionable, but it soon passes off. A few saucer-like gumlas, *pir-ritch*, for standing lilies, etc., in water, must be procured, also some with holes in the bottom for planting your violets, achimenes, etc.

### Gardening Books.

THESE are without number, all valuable for the different kinds of information given to different kinds of gardeners, and when you and I, who are only *beginners* in the art, have mastered the rudiments and want to increase our knowledge, we must get some of these delightful books. Firminger for India generally ; Macmillan for Ceylon and South India. There are, on the whole, few books now in print dealing satisfactorily with Indian gardening. We can glean many ideas from gardening books published in Europe or America. Such are the books of "The Present Day Gardening Series," published by T. C. & E. Jack, London. Cuthbertson's "Sweet Peas and Antirrhinums" and "Pansies, Violas, and Violets" are useful. We must

remember, however, that these books are written for another country and use our local knowledge and our commonsense in adapting the methods and plants described. "Ferns and Fern Culture," by J. Birkenhead, revised by J. Parsons (price 1s. 3d in Britain), is a good book of its kind. Beddome's "Ferns" deals with Indian species. G. M. Villiers Stuart's "Gardens of the Great Mughals" (G. & C. Black, London) gives you an accurate idea and a charming description of India's ancient garden glories. Thacker, Spink & Co., Calcutta, can supply all the above-mentioned books.

Then another little book you must not go without is *your own note-book!* When you go into garden in the morning, take this little book with you as a matter of course, as you would take your gloves or your sun hat! Opposite the date, pencil all you do, and leave a margin for additional remarks as you gain experience. You should enter what plants are bought and at what time, etc.

The mali trembles when he sees  
 You making notes about your trees;  
 And should your note-book disappear,  
 He'll steal your plants without a fear!

All I have told in this little book is gathered from notes made in my garden for seventeen years.

### Garden Stands

Of different kinds can be very easily made under your own direction; those of gnarled wood are most rustic and suitable. Buy, in the first instance, one or two cart-loads of firewood, just as it is brought in from the jungles: I mean, before the firewood vendors cut it up into billets. In any carpenter's workshop you are sure to find some "'prentice" boys; hire a smart lad on 5 or 6 annas a day, and set him to work at your "*thi-paies*," the one word by which they express *stands* of sorts. With soft wire, make *small*-models of the sort of stands you want, and then set the lad to work to cut and nail the pieces of

crooked wood together. Let us imagine a skeleton table without a top—four legs three feet high, held into a square shape with transverse bars at the top and at the bottom, the length of the bottom bars two feet, and of the top bars one foot, this will form a skeleton table, broad at the base and narrow at the top. Diagonally across the four *sides* of this table, let the boy-carpenter nail a rough, irregular lattice work of the thinnest and most crooked pieces of your firewood, and there you have a delightful rustic stand! Let him go on and make others in the same way, varying the shapes sometimes by producing *three-legged*, triangular stands, and *six-legged* round stands, and so on, your own ingenuity furnishing other wire models for his guidance. The Jail at Shahjehanpur makes these rustic stands, at eight annas each, of various sizes, “nested” to occupy less space in transport by rail. You might get one from there to give your lad clearer idea of what you want him to do.

But you have not done with your carpenter-boy yet! The wooden cases in which your kerosine tins come can be cut up into

### Trays, Hanging Baskets, etc.

ALL odds and ends of deal-boxes, too, can be utilized for this purpose. Let the boy saw them into strips half-an-inch wide, and cut these strips into lengths of six, ten, or twelve inches. He will do several hundreds in a day, and you will not have too many. All these pieces ought to have a hole bored through them within an inch of each end. The six-inch pieces to be strung with wire for hanging baskets, and the ten and twelve-inch ones to be strung in the same way for the trays, and formed into six, eight, or ten-cornered receptacles, according to your requirements. These nests or receptacles need not be more than five or six strips deep, and your tinman must fit them with tin bottoms, and see that the pieces cut for these bottoms are large enough to have half-an-inch turned up all round. The horticultural wire should be laced underneath the tin so as to support the weight of soil, *kunkur*, etc., which are to be put into

it. The boy may cut boards to fit the bottom of the nests if you prefer it, and the tin lining may rest on these boards instead of on the wire lacing. I prefer the wire lacing, as the boards are apt to swell and warp.

The pieces of wire used for stringing the strips together should be twisted off into a loop; you will fix your suspending wires into these loops when you come to hang up your baskets.

Each kerosine tin has a ring of strong iron wire by which it is lifted. Tell your tinman to bend these into hooks in the form of an open **S**, for you will find them most useful for all the nests, baskets, and pots you wish to suspend with wire.

### Pillar Stands

ROUGHLY made of bricks, I find very useful and convenient. Place three bricks flat on the ground, letting the corners touch each other, so as to leave a triangular space in the middle; place three more bricks on the first three, letting each brick *lie across the corners of the lower ones*. Pile them in this three-cornered style till you have a pillar from twenty-four to thirty inches high. The outside will present a honeycomb appearance, and in the little triangular cells you can plant small ferns, like "maiden-hair," or *lunulatum*, *caudatum*, etc. The centre of the pillar fill up with earth, and on the top place a tray or pot of ferns, etc. These pillars keep damp a long time, and are really very nice for conservatories. If not required after a certain time, they can easily be removed.

Cyanotis ("Wandering Jew") trained up these pillars will take root and clothe them very prettily; of course you can make these pillars of a larger circumference than three bricks, but you will find an odd number, 5, 7, and so on, gives a prettier appearance than if made with an even number.

We shall now proceed to consider our plants in alphabetical order.

### Acalyphas

ARE handsome foliage shrubs, suitable for shrubberies and for pots in verandahs; the cultivation of them gives no trouble. The rainy season is the time that these plants are in their glory. Begin with two kinds, *Acalypha Wilkesiana tricolor* and *Acalypha obovata*. Get cuttings a foot long, and plant them first in the shade, and when you see new leaves have sprouted, take them up and plant them where they are to remain. In the winter those in the ground will shed their leaves, and should then be pruned to within two or three feet of their base. Those in pots, if kept in verandahs, will not shed their leaves but change colour somewhat; prune these just before the rains begin. When the monsoon has well set in, put out those in pots to get as much rain as they can. At this time all your acalyphas will send out new shoots vigorously, and the beauty of their rich, glowing shades of red and brown will reward you well for the little trouble you have taken with them. Tubs of it, in porches where they can be seen against the sunlight, make gorgeous show, Watering over the leaves suits best.

*Acalypha hispida* is a plant with long brilliant red tassels of small closely-packed flowers, and is well worth cultivation as a pot plant.

### Achimenes

ARE small plants with exquisitely beautiful flowers, and must be grown in hanging baskets, in trays supported on stands, or in pots kept on good thick bricks. Send to the nearest Government gardens for two kinds to start with: *Achimene longiflora major*, a pale, mauve satin-like flower; and *Ambrose Verschaffelt*, flowers French grey. They are small tubers and are sold at a few annas per dozen. They increase three-fold each year, so a few dozens to start with will be sufficient. They do not require any depth of soil. Use the soil recommended for seed-sowing, adding a little more sand. Use the flat pots called *pir-ritch*, spread first a layer of dry grass, then a few small



crocks, next fill up with soil—water the soil—make five holes with your finger about half-an-inch in depth, put one tuber in each, cover over each hole lightly, keep these saucer-pots on the edge of your verandahs where they will get plenty of light and air; direct *sun and rain spoil them*. For hanging up, here is a good way. Cut a square foot of your wire netting, spread it with moss, putting the pile or surface side of the moss next the wire, then a layer of coir or dried hay, spread over an inch of soil, sprinkle with water, plant five or six tubers, cover over with soil, make a ball by rolling up three or four crocks with moss, put this ball on the centre, then gently gather up the four corners of the wire netting and compress the whole into a round mass; suspend by wire and keep as moist as possible. When the flowers all die down, as they do when the rains are over, hang up these balls in a shed, or to a rafter in a godown. Next May—about the end—bring them out and sprinkle slightly with water, you will find shoots thrusting themselves out in all directions, and when the rain has fairly set in, these will form lovely globes of blossom. If you want to use the pots and saucers again, in which your achimenes are, stop watering when they die down, and when the soil is all but dry, turn out and carefully pick up the tubers, putting them away in dry sand till next May. Those in the round wire baskets are best left alone for two or three years, or till you think the moss wants renewing.

Sutton & Sons' tubers are the best. Where you wish to be economical, it is always advisable to start with the *best* in seeds, bulbs, etc.

#### **Alternanthera amabilis**

Is the pretty variegated green and red and brown leaf edging so necessary for borders to flower-beds which you wish to have well defined and kept trim and tidy. It grows very quickly; you can probably get it for the asking from friends' gardens, or buy a few basketfuls from the nearest public garden. Plant at the beginning of the rains as follows:—Cut it all up into pieces four or

five inches long, and plant these pieces three together, in a line, leaving a space of two inches between the groups. This is the most economical arrangement, but, if you have plenty and to spare, you may plant two or three lines of it for each border, for the thicker it is the better. In the rains, when it grows very fast, keep it trimmed with your grass shears, planting all you clip off in a corner of your reserve plot, to draw upon for future need. In the hot weather, if it looks shabby, watering will set it all right again.

### **Amaranthus.**

THERE are different kinds of these charming foliage plants, get seeds of *Amaranthus tricolor* and *Amaranthus salicifolius* ; sow sparsely on leaf-mould ; take up the plants carefully when two or three inches high, and then plant out in bright sunshine. After the rains begin is the best time. They are pretty in clumps with a border of balsams, or by themselves ; some should be put singly into ten-inch pots. These two kinds droop away in the very cold weather, but there is another kind, *Amaranthus melancholicus ruber*, which lasts all the year round. It grows from both seed and cutting ; cuttings are best, as they take very readily. Put ten or twelve cuttings into boxes in the rains, and keep these boxes on stands, as the branches droop over very prettily. At the end of the rains bring these stands into the verandahs where they will get the morning sun, or keep them under the trees in your conservatory. In December and January the plume-like sprays of flower come out and are very useful for decorations. (*See* "Hints.") Increase by plentiful cuttings put down anywhere where they will be sheltered from frost. *Amaranthus* means *immortality*, and is devoted to St. Cajetan, 1547 A.D. (7th August).

### **Aristolochia**

Is a climbing shrub recommended for many reasons : its flowers are extremely curious, it grows easily from layers, is of rapid growth, has foliage thick and ever green, is

very well adapted for twining round poles in conservatories or round pillars of porches, and its leaves, which are something like kidney-shaped ivy leaves, keep fresh for a long time after they are plucked, and are therefore most useful in foliage decorations. There are many kinds of *Aristolochia* : to begin with, ask for those with thickest foliage ; plant in the rains. The flowers have at one period of their development a rather unpleasant odour, but this does not last long, and does not carry very far.

#### **Arundo donax.**

A TALL, striped white and green grass, very effective if grown here and there in clumps of foliage plants in shrubberies, in rockeries with *Canna* and *Acalypha*. Get roots of it in the rains, and plant where it will get plenty of sunshine, but not where it will be subject to the force of the hot winds, which it does not like. It is very hardy when it once establishes itself, and grows all the better for being thinned of the side shoots, which you may detach and plant elsewhere. If any of these handsome reeds should appear to be fading away, water freely ; if that does not revive it, leave it alone, you will find new plants sprouting in the rains the following season. Its flowering spikes should be preserved for decorations.

#### **Arundo donax versicolor**

Is a dwarf kind of the same reed. Grow it in borders in your open-air conservatories, and in small pots to use in trays and for indoor decoration. Increase by removing the suckers during the rains. If your part of India is frosty, these pretty grasses will die down in winter ; then you must cover up the pots with dry grass and leaves ; when the rains begin they will all sprout again. (See "Hints.")

#### **Asters**

HAVE much to recommend them. They are easy of culture, make a lovely show, and the blooms, whether

left on the plants or cut for decoration, last twice as long as other ordinary flowers. Sutton's varieties are splendid, and never fail. Send for any or all of the following: "Mixture of delicate shades," "Mixed Victorias," "Mixed Comet," etc. Sow in October in boxes, dropping seed by seed in lines. When four leaves have developed, plant singly in six-inch pots, keep in shade for four or five days, then place the pots in open sunshine. Water at the root; save the seed.

### Balsams.

No garden should be without these most showy plants. If your garden is not very large, half an ounce of seed will be sufficient for you to start with. Get *best double mixed* varieties from Sutton & Sons.

Have a succession of sowings from the break of the rains and for two months afterwards. Balsams want a lot of space. When sowing, drop each seed separately so that the seedlings may not crowd too closely. As soon as four leaves have developed on each plant, take them up and plant again in pots, making holes deep enough to receive the whole of the stem, so that the lower leaves may rest on the surface of the soil. As soon as they show a few more leaves, take them up again, and plant them in borders eight inches apart, or singly in pots, again taking care to sink them up to the lower leaves. Put a good many in pots, as they make a delightful show in-doors and in verandahs. As the plants throw out *side branches*, snip them off carefully, so that all the flowers should be borne on the centre stem only, to form quite a torch of bloom. Heavy rain spoils the flowers, so bring the pots under shelter if rain is continuous. Save the seed for the following year. Balsam means *impatience*, and is devoted to St. Lawrence, Martyr, 258—(10th August).

### Bamboos

ARE magnificently graceful! In a garden such as you and I are undertaking very few will be wanted. One or

two here and there in the bare parts of your compound are greatly to be desired. Nothing can exceed the grace of the common bamboo—the vigorous kind—procurable everywhere.

There are many species of bamboo, and one of the prettiest from the gardening point of view is the yellow variety striped with green. There is a delightful irregularity about the striping. These plants are propagated by cuttings. A part of an existing "stool" or clump, with young shoots appearing, if cut off and transplanted, gives a satisfactory plant. Bamboos like plenty of soil moisture. As they usually grow to a considerable height and spread themselves abroad by their numerous stems, it is desirable to have them at some distance from the bungalow. The creaking of the stems against one another at night is also an argument against planting them close to the dwelling.

There is a dwarf kind which you may grow in the centre of small grass-plots. Write to your nearest public garden for some *Bambusa nana*, they will increase largely each year, and you can multiply them by dividing the roots in the rains.

Mix a little sand with the ordinary garden soil and give your bamboos plenty of room to expand. When first planted water plentifully, after that only occasionally in the hot weather. Always cut away those stems that are fully developed and show scant leaves; the fuller greener shoots will grow all the better. In a small garden the single bamboos grown on grass-plots need not be allowed to grow higher than ten or twelve feet. Those at a distance in your compound may grow as tall as they like; but if you want it to add to the beauty of the view, you must cut away the old stems and prevent them spreading into a jungle. Plant and transplant in the rains. If large full-grown bamboos are to be transplanted, see that you dig well down, so as to take up with it plenty of the soil in which the roots are embedded.

**Bauhinia—Kuchnar.**

THIS is more a tree than a shrub, but it is a lovely thing to have here and there in your compound, for, when in bloom in the hot months, its elegant azalea-like flowers will provide you with abundant decorations. (See "Hints.") It can be propagated easily by seed sown at the beginning of the rains. Decide where they would look best, then have holes dug about three feet deep, fill them with good earth and twenty pounds of cow manure, and in the middle of these place four or five seeds. Protect the holes with some brambles or babul to prevent cattle going over them. The plants should be watered occasionally during their first hot season, and may then be left to themselves. *B. variegata* bears lovely blossoms of a peach-like mauve, blended with purple: *B. candida* has white flowers which are exquisite! I would like to see in every station an entire avenue of these trees as at Barcilly, and when in bloom, I can imagine nothing more beautiful or more fragrant.

**Beaumontia grandiflora.**

I AM sorry I can't give you any but the Latin name for this noble climber. You may have seen its grand branches of white lily-like flowers, and have naturally wished to have some for yourself. It can be grown from cuttings or seeds put down in the rains, and later on; but a better plan will be for you to buy a plant from the nearest Government garden, and when it is well established, make cuttings yourself. On an archway of brick, stone, or very strong poles to mark entrance from one part of the garden to another, this magnificent climber is a sight worth taking some trouble about.

**Bignonia.**

BEAUTIFUL, flowering creepers, blooming chiefly in the hot weather, or, more properly speaking, from February onwards. *Bignonia gracilis*, with pale lemon-coloured flowers, comes into bloom at the end of the rains in some

places, Shahjehanpur for instance. *B. incarnata* has flowers shaded lilac and purple; *B. venusta*, most brilliant orange. These are all easily propagated by cuttings or layers in the rains and cold weather. *B. incarnata* and *B. venusta* are very vigorous and want strong support. I don't approve of verandahs being blocked up with creepers, and though I admit that a thatched roof covered with *Bignonia venusta* is a really glorious sight, I prefer to train it on screens to hide the view of servants' houses, on an ugly bit of outhouse wall, on old, almost leafless trees, etc. *Bignonia gracilis* will cover a stone wall without support, like ivy. All these bignonias are better for having the lower stems clipped after flowering.

#### **Bombax malabaricum**

Is a large indigenous tree, generally found somewhere in the compound of most houses, and known as the "silk cotton tree." If you have any, leave them where they are, as they don't bear transplanting, and their shaded deep red velvety flowers don't clash with other colours, as the raw magenta of the Bougainvillea does. If your compound will admit of it, plant some seeds of this in June, in the way recommended for *Kuchmar*; but let me advise you to plant this beautiful flowering tree in one or two large clumps, the holes for the seeds being dug fifteen feet apart. If the trees thrive, you can later thin them out to thirty feet apart. The flowers which appear in the hot weather are very effective for decorations. (See "Hints.") I hope you won't be impatient at my advising you to plant things you might not reap the benefit of yourself, but remember our generous motto—"Sic vos non vobis"—"Sow you, not for yourselves."

#### **Bougainvillea**

INTRODUCED into Europe by De Bougainville, the French navigator, will be found in almost every garden laid out by a mali. If you have got it, don't keep it in your front garden, for its magenta-coloured bloom kills by contrast

the effect of all the other flowers in your garden. Transplant it at the end of January to some distance from your house near your outer gate or to hide servants' quarters, where, "alone in its glory," it will brighten up its surroundings. You must see this done yourself, for it is dear to the eye of the mali, who will not banish it willingly, an unwillingness we must not be surprised at, for in an old French book on the subject of flowers—on which Messrs. Saunders and Otley founded their charming "Language of Flowers" (and which I had advised you to read)—there is a story told of how "De Bougainville's South Sea Islander, on being taken to the Botanic gardens in Paris, knelt before this Otaheitan shrub, and kissed it as fondly as he would have kissed the lips of a beloved mistress."

There is a very considerable blue element in the colour of the Bougainvillea flowers. If you look at it through chlorophyll-green glasses, such as one uses to protect the eyes from the ultra-violet rays of the sun, the flower appears red.

A variety is known and occasionally cultivated in India which has the red without the blue tinge. The usual plant (*with* the blue) is *Bougainvillea spectabilis*. The red plant is a variety of this called *B. lateritia*.

#### Box [Sumatra Box]

(*Murraya Exotica and Sumatrana*), native name is *Kaminee*. Most desirable shrubs to have in your garden, both for their fragrant bridal-looking flowers and their dark shining foliage. Get cuttings in the rains, and put them in your shrubberies or in the centre of small beds cut out in grass-plots. As the Sumatra Box is an evergreen, you may plant round it the following:—hot weather, amaryllis; rains, coleus, balsams, etc.; cold weather, coreopsis bordered with white candy-tuft, or marguerites bordered with dark-coloured nasturtiums. As your shrubs grow big and strong, prune the lower stems in the rains, and plant them in your reserve plot for future use. You can't have *too* much of it.



### Caladiums

ARE handsome foliage plants you know very well, and which are grown from bulbs. To begin with, write in the hot weather for some of the inexpensive kinds. They will make a fine show in the rains, and when you have learned how to treat them properly, you can venture on other varieties. I don't know why caladium bulbs should be dear, when they are very easily grown and increase and multiply tremendously. In gardeners' phraseology caladiums begin to "*move*" in the hot weather. Put your smaller bulbs into 10-inch pots and the larger ones in 12-inch pots *in May, but don't water them*. If you do, they will outgrow their strength and look limp and "*leggy*" just when they ought to look their best. When the rains begin, they will get on splendidly and you can then water them freely. Plant them in the soil recommended for seed-sowing, adding a little powdered charcoal, and when you see they have put out some leaves fully, you must begin to give them liquid cow-dung once a week, or every ten days. When you plant the bulbs in May, keep the pots in verandahs, or under a shady hedge where they can be protected from the sun and hot winds. Once they have started, arrange the pots where you will probably allow them to remain, because they like to settle themselves *towards the light*, and the light side of their position will be the *showy* side of the caladiums. Sink some pots in your rockeries, for your stands use the trays mentioned in paragraph "*Trays*." These should be kept in your conservatory in places where they will get plenty of light from the *top*. In this way they will make an *all-round show*, different from the one-sided show their humbler brothers in low pots will make. Caladiums grown high grow better than those grown low. Those you will want for your fireplace should be grown in boxes; you will find wine or kerosine cases filled with bulbs of different kinds the best for this purpose. One dozen bulbs to a case will be sufficient for a grand display. As the rains cease, caladiums begin to droop: water them at this time only occasionally and stop watering altogether when there are no leaves standing upright. If you require the pots for your chrysanthemums

(which will want re-potting at this time), turn out your caladiums from the pots, but leave them as they are in their own soil for a day or two, to dry a bit. Then pick out the bulbs, and keep them in kerosine tins with plenty of dry sand or earth between the layers of bulbs. Keep the different kinds separately, so that you may know which is which the following May. If you can afford to let the caladiums remain in their pots, leave them standing in the sun for a month; then pile them one on top of the other in some safe place in your verandahs or godown, but beware of white-ants and rats! Beware also of the thieving malis who have spotted your best ones, and will quietly abstract the bulbs and tell you they rotted away. But, strange to say, the rotted away caladiums will bloom the following year in the verandahs of some other house.

#### Camphire (Mehndee)

Is one of the commonest yet most delightful of Indian shrubs. In that pearl of passion, the Song of Solomon (I., 14), occurs the passage—"My beloved is unto me as a cluster of camphire in the vineyards of Engedi." In the original of this Song, written about 1000 years B. C., the word translated 'camphire' is *copherius*, the Egyptian equivalent of which is *hennah*, called in India *mehndee*. In a most interesting lecture on "Camphire and Camphor," by J. C. Sawyer, F.L.S., in the *Scientific American* of 30th April, 1892, you will find all sorts of information about these two things; but I shall here quote just a little about camphire only. This camphire, or *hennah*, is Pliny's "Cypress of Egypt," and the women of Egypt and other Eastern countries stain not only the palms of their hand and the soles of their feet with a paste of *hennah* leaves, but also the tips of the fingers, the nails and the knuckles from which custom probably arises the designation of Aurora as "rosy" or "rosy-fingered." The word "cluster" found in the text refers to the flowers of this plant which are of a golden yellow, are borne in clusters and are remarkably fragrant. It is known to the Arabs

as *hennealkennah*, has been cultivated from the earliest times, and is common throughout India, Kabul and Persia as well as along the coast of the Mediterranean. Botanically it is known to us as the *Lawsonia inermis* of Linnæus. It has been introduced in the West Indies, and is there known by the amazingly commonplace name of "Jamaica mignonette."

Yes, the common *mehndee* of India is a shrub you ought to treasure. Nothing grows so fast in the way of hedging. Nothing scents your garden so sweetly and delicately as its clustering blossoms, the pretty form and colour of which are something between myrtle blossoms and mignonette. Myrtle takes a long time to grow, and mignonette lasts only a few months, but the camphire of Solomon is with you always. As soon as the rains begin to fall, put down cuttings 18-inch long in ordinary soil; it will take root and grow at once. When wanted for a fence, put down three or four rows of the cuttings in a foot-wide furrow, and let it grow to a height of four feet. The top should be cut very evenly several times during the rains with your big garden shears and clipped along the sides so as to make the hedge from the top to bottom of one uniform width. Let me impress upon you the importance of keeping your hedges well and neatly trimmed, for, however nice your lawn and beds may be kept, an untidy hedge will spoil the effect in the same way as a battered and broken frame would detract from the look of a picture. And remember, a hedge must be kept well filled up with branches and leaves near the ground. It is not uncommon to see a hedge, spreading and leafy on top, scraggy and leafless at its base. The secret is to cut back early and to keep on cutting back.

Besides your *mehndee* in the hedge, let me advise a number of clumps of it to be grown as flowering shrubs; you will want all the flowers. The hedge being constantly clipped will not be able to put forth its blooms; but those on the clumps should be allowed to grow to its utmost height, and need only to be slightly trimmed so as to keep it in rather an oval form. Oh! this *mehndee* is a most

lovely thing, and I am much surprised that its beauty is not more appreciated. (See "Hints.")

### **Candy-tuft.**

A PROFUSELY flowering low-growing annual. It is, by itself, rather uninspiring, but good wide borders of the white kind, next to other *bright* coloured annuals, look effective, especially if you will keep a perfect outline by pinning in stray stems with long pins made like huge hair-pins out of your "horticultural" wire. Small diamond-shaped beds of white candy-tuft, with a centre and a narrow border of dark red phlox, are extremely pretty. It is, on the whole, to be regarded as a filler-up of spaces between more decorative plants. Decide where you will keep it, because (as it won't bear transplanting) you must sow it where it is to remain. Put some in 5 and 8-inch pots as you will find it a great addition to any mass of pretty flowers you may wish to put together for indoor temporary decoration. Sow in June and October in the soil recommended for annuals. I don't advise purple candy-tuft, as you will have plenty of other purple and mauve in your small garden.

### **Canes**

ARE well worth cultivating, for their graceful shining foliage makes them exceedingly ornamental for both outdoor and indoor purposes. If you are staying not far from swampy places where canes abound, you can easily procure clumps of them; if not, they do not cost much to buy at Government gardens; and if you treat them properly, they increase and multiply very satisfactorily. Procure them when the rains have set in. With me they have always thriven splendidly in the following soil:—One part ordinary earth, one part leaf-mould, one part sand, one part pounded *kunkur*. *Pray, don't give them any manure.* They will like living in your rockeries, especially if these are placed against trees, as described in "Conservatories": for then they will grow

up right into the trees. Have as many as you can in 12-inch pots, planted singly, for indoor decoration, and keep these pots in any part of your conservatory where they will get plenty of light, but no sun directly on them. They don't like sun, and the beautiful *gloss* which is natural to them is lost in sunlight. Water at the root, and also all over. In the hot weather give them water twice a day if you can. In the winter, shelter them from frost. The year after they are planted you may increase them if you see new shoots all round the pot. As they are frightfully thorny, the best way to set about this is to fold sacking or a *kummul* (horse blanket) round the cane, and tie loosely so as not to bruise the leaves. Dig round the roots, and cut away with a sharp knife those side shoots which you see have thrown out roots for themselves. Don't do this at any time but in the rains, and *at once* plant those you have separated. If you see any of the tall old stems turning yellow, cut them away: the new ones will grow all the better for it. Though canes like swampy places in the jungles, don't attempt to stand your pot canes in water: they will all spot yellow and rot away if you do. Change your drawing-room canes every day, and don't keep them shut up at night. (See "Palms.") During the monsoon keep them where they will get as much rain as possible, as this is their growing time.

### Canna

You may have known under the name of "shot-lily," a name ugly in itself and not particularly appropriate. No large foliage plant grows more easily than canna. There is scarcely a garden where you don't find the common kind, *Canna indica*, with broad green leaves and bright scarlet flowers. Plant some of this by your well, where it will grow in wanton wildness, and provide you with endless material for indoor decoration. The most handsome canna, and quite as easily grown as that just mentioned, has, unluckily, a frightful name—*C. Warczewiczii*! This Russian gentleman has beautiful bronze-red or brown leaves, and very rich red flowers.

Many of the most beautiful cannas of the modern florist are hybrids between this variety and various others. Cannas require a rich, friable, and moist soil. Given this, and a liberal supply of manure, they will produce for weeks in succession a magnificent mass of colour. Flowers should be cut off immediately they wilt and before seed is set, to prolong the flowering period. Treat them like caladiums as to the care of their tubers. These tubers should be divided into pieces, each piece having one or two buds, and replanted in May. The seeds of the canna are very hard. It is best to pare a little bit off the hard shell, exposing the soft inside, to induce them to germinate. Cannas look their best in masses by the edge of ponds, tanks, wells, or water-channels. As pot plants they do well on the shady side of a house.

The flower is rather a botanical curiosity. You will find the pollen deposited on the side of the flat spatula-like central member, the style.

### Chandnee.

By this I mean a common, large shrub bearing most exquisite white flowers with a faint odour, foliage of a brilliant shining green, and known by the long name of *Tabernamontana coronaria*. You very probably have some old shrubs of it in your garden; the flowers of these thick, woody old shrubs are not as good as those of new young shrubs. So if you take my advice you will dig up your old bushes *in the rains*, and make new plants by separating the rooted stems or by cuttings. It grows very quickly, and you can get quantities of it in this way.

If you have none of your own, any neighbouring garden, I am sure, will be able to supply you with cuttings. When the flower-buds begin to form at the end of the stems, thin off the leaves. By so doing you improve the size of the flowers. When grown in partial shade the foliage of this plant becomes very dense, and the flowers sparse, so see that you give it all the sun and light you can. Each clump or shrubbery ought to have at last two or three

of these lovely bushes. If you look at this shrub on a moonlight night, the dazzling whiteness of the blossoms and the bright sheen of the glistening foliage will explain how it has got the native name of "*chandnee*," i.e., "moonbeam." I don't think these moonbeams are valued as they deserve to be. (See "Hints.") Prune your shrubs in oval form in the rains, and the branches pruned off should be placed in the shade till rooted; then taken up and planted where wanted. It does not require any particular soil.

### Chrysanthemums

ARE lovely flowers that reward all the care taken of them. I do not in the least wonder that the Japanese, keen lovers of the beautiful in nature and art, should hold these flowers in reverence, and introduce them so constantly in all their designs. Payne\* mentions that about the year A.D. 900 the Emperor Uda of Japan first instituted the famous chrysanthemum show in the gardens of the Imperial Residence at Tokio. In A.D. 1186 the sword hilts of the Emperor were decorated with figures of the flower, and a conventionalised form of it is used, and has been for centuries past, as the crest and official seal of the Mikado.

A large number of excellent varieties are now available from all seed growers at prices ranging from four annas to one rupee per packet. If you can secure rooted cuttings, so much the better. Try to have these put down by *15th March* into soil composed of leaf-mould well-rotted, sand and powdered charcoal. The sand and charcoal are to prevent the soil from clogging. Chrysanthemums hate sticky soil; and when you see any plant looking yellow and sickly during the flowering season from October to March, turn it out, and put it into fresh soil with a little extra charcoal. When buds form, as

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\* Chrysanthemums, by Stevenson, Payne and Shea. Present Day Gardening series. T. C. and E. C. Jack, London and Edinburgh.

they do about the beginning of October, snip away, with fine-pointed scissors, at least half of what you see at the end of each stem: your flowers will be all the finer in consequence. Where you are growing for mass effect, leave all the buds on. Where you want the biggest and best possible flower, select a bud near the tip of the shoot and remove all buds but this one. Cut off the stem above this selected bud. When the buds swell, they become very heavy, and the weight increases as the flowers expand and retain the dew, so you must support the stems by tying them to thin bamboo stakes. The stems are brittle, and if tied with twine, are easily cut. A good plan is to steep a yard or two of thin cotton cloth in green dye made by pounded leaves (mango, jamun, etc.), then tear the cloth into narrow strips and use for chrysanthemums. While the chrysanthemums are in bud and flower, give liquid manure twice a week. There is one thing you must remember about these plants, and that is, you must transplant them *twice a year*—at the beginning of October before they flower, and at the end of February when they have done flowering. When their flowers are over, cut off those stems and plant them in a shady place on slightly raised ground. Most of these cuttings will take root and may be transplanted in October. See that they are watered in the hot weather, and during the rains you must take care they don't get water-logged, or else they will rot away. Chrysanthemums make a tremendous quantity of suckers, so in March and October take them up, shake away all the old soil, and separate the suckers, planting each separately. I advise you to have as many as you possibly can in *pots* of the 10 and 12-inch size, because you can move them where you want your best show of flowers, and, what is more important, move them out of the driving wind and rains. After the March transplanting, I keep all my pots on the two lower edges of my east verandah (see "Verandahs"); here they get all the morning sun, they are here sheltered from the hot winds of May and from excessive rain in the monsoons as the eaves of the verandah just prevent their being drowned. In this way I never lose a plant, not even a



single branch ! In the hot weather they should be watered all over the leaves plentifully with a watering-can. While they are in flower, water at the root only.

The chrysanthemum is a plant with a large literature of its own, almost as extensive as that of the rose. We have not, as yet, I believe, any special Indian book on its growing in this country, but from the writings of experts in other lands we can get a certain amount of help, always making allowances for the difference in climate and other conditions.

Remember that the chrysanthemum is not difficult to grow, but much skill can be exercised in getting the best possible results: In this case, as in the case of other similar plants, the best results are obtained by selecting good cuttings, growing these in light soil of mixed sand and leaf-mould, and transferring to successively larger and larger pots with a gradually stronger and coarser soil. Top-dressing with manure in the last stage puts the finishing touch on the plant.

There are now various classes of chrysanthemums, each with its special beauty and purpose. The border chrysanthemums make a splendid display in beds and borders. Japanese chrysanthemums are excellent for the garden or for pots. The Incurved or Chinese chrysanthemum may be brought to great perfection as individual blooms. All may be effectively used in indoor decoration. As they are inexpensive, most prolific, and not difficult to rear, I strongly recommend you to undertake their culture. (See "Hints.") Chrysanthemum is the flower for 7th and 23th October, and devoted to St. Simon the Apostle, and Pope St. Mark 336 A.D.

### **Coleus.**

BEAUTIFUL foliage plants of immense variety. Among plants with coloured leaves, I know of nothing more easy to cultivate, more effective or more prolific than these, and therefore they are to be strongly recommended. Colours vary enormously. There is one variety with nearly

black leaves, that looks most effective against a white-washed wall. Get a bundle of cuttings at the beginning of the rains, and put them down at once in a partially shaded corner, in soil composed of equal parts of leaf-mould and stable litter, with a sprinkling of sand. But they will grow even in ordinary soil during the rains. Coleus cuttings will root either at the joints (nodes) or at the intervening spaces (internodes). In this they differ from many plants which root at the nodes only. This is why most gardening books tell you always to make the cut at a node when taking a cutting. Don't take the leaves off coleus cuttings. Let them stay on the stem. I shall take it for granted you are just beginning with your very first batch of coleus cuttings. Well, when those in the ground throw out three or four branches, which they are not long in doing, take of each plant as many cuttings as you can, five or six inches long, plant each in an 8-inch pot and see that you sink quite half the cutting beneath the soil. Keep these pots in the shade of your conservatory where they will get plenty of light and rain. As soon as these have in their turn put out three or four branches, you may cut off these too, and increase your supply in the same way, and go on cutting through July and August without scruple. Each cutting will make a beautiful plant for you all through September, October and November. Of course, if you don't want hundreds of plants for clumps and borders, you need not cut so much. You will see the new leaves come out in pairs; with your finger and thumb pinch off here and there the newest pair appearing at the *end* of each spray. This makes them throw out more leaves underneath, and helps the plant to a *bushy* appearance. If the weather is frosty, bring all your coleus under shelter. If you want to have abundant supplies for next season, you must cut up all your pot plants into pieces, and plant them under some shady trees or close together in wooden boxes or big *nands*. Here they will grow *slowly* but *safely* through the cold and hot weather, and be ready to give you hundreds of cuttings again in the next rains. Don't imagine you will be able to keep any of your old plants or coleus in pots just as they are through

the hot weather ; these, by the time the rains begin (if they have not died altogether !), will be scraggy and almost leafless ; and if you attempt *then* to make cuttings from them, none of them will strike ; while those you had cut up in November and December and put into the ground and boxes, etc., will be flourishing plants ready to give you tenfold more cuttings when the rains begin. (See "Hints.")

During the rains you will often find a small green worm attack the tender leaves of your coleus plant, and this you must get rid of as soon as possible. Mix a wine-glassful of kerosine in a gallon of hot soapy water, and when cool, spray your plants freely with it. This should be done in the evening.

### Coreopsis

"Love at first sight," recommends itself, as it is a bright yellow, or yellow and brown annual. The colour and extent of the brown "eye" varies a good deal, and you may select seed to perpetuate any special variation you like. Sowings may be made at the break of the rains in all places with a rainfall of 40 inches or under. In other places it may be better to sow in October. Sow in boxes or pots and plant out when about three inches high. These plants are eminently suited for the centre of small beds or as the tier, in borders, between the lowly herbs and the tall background plants. Their colours go well with other yellows, or reds, and with whites, but do not mix well with blues. Coreopsis makes an excellent indoor decoration when cut and placed in vases. It practically arranges itself. It is very hardy. It sows itself and plants always appear in ground where it has been sown. Cut away old flowers before the seeds form (except in cases where you are deliberately saving seeds) and the plants will remain in bloom longer.

### Cornflowers.

THEIR meaning in the Language of Flowers is *delicacy*. You can't do without their elegant blue blossoms, especially

as further on you will come across its best companion, the poppy. The *blue* cornflower is what you want, so send for seeds of *Centaurea cyanus*, and sow towards the end of October just where they are to remain, because they won't bear transplanting. If you can spare a good big bit of ground about twenty feet square, sow poppies and cornflowers in lines two feet wide; if not, in small square beds, marking each bed into four smaller squares, and sow cornflowers and poppies in each alternate division. Some of these small squares ought to appear in the space left for annuals in front of your shrubberies. Water along the roots: they won't stand watering from above. But the heavy dews of the cold months keep them going so well that they don't require frequent watering. Save seed of your cornflowers and let them dry thoroughly in loose muslin bags before putting them away in bottles. Cornflower is set down for May 29th and June 28th, and is devoted to St. Cyril, 275; St. Irenæus, 202. (See "Hints.")

### Crotons

ARE the handsomest foliage plants one can cultivate. They are not difficult to propagate or cultivate, and form a perpetual supply of brilliant and varied colour.

You must remember they like a *moist* climate, so if you live in the North of India, you must have a glass-house, or a well-protected "chick" house, for keeping them. In the Southern parts of India they grow in great profusion without the slightest trouble, almost anywhere in the open air.

Cuttings should be taken as follows: select a strongly growing plant with the top of its branches half ripe. Cut off the top of a branch about 8 inches below the end. Allow all the leaves to remain on. Plunge this cutting into moist sand in a warm shady place (inside a glass frame if you have one). Moist coconut fibre or even water can be used for rooting these cuttings, but water is not desirable. When roots have formed, as may be seen by gently removing a little sand or fibre, pot the rooted cuttings into small pots and gradually harden them off.

Cuttings take root quite easily *in the rains*, and should be put down in rich soil in a shady place. When they have rooted, take them up and plant them in pots or boxes so that you can remove them out of the cold (if you live in Northern India), or you may plant them in your shrubberies and open-air conservatories (if you live towards the South of India), where they will thrive all the year round in the ground.

Crotons should always be watered with a fine-rose watering pot, so that the dust being washed off, the leaves will be able to *breathe freely* and show their lovely colourings.

Crotons thrive either in pots or in the ground. In India, on the whole, it is better to give them some shade, and many of them will flourish in quite dense shadow. The soil should be well drained and rich. These two qualities are ensured by adding plenty of old stone rubbish or broken bricks to the soil and by giving plenty of coarse manure. In the early stages liquid manure is best.

“Freak” crotons may be made by grafting several kinds on to one tree.

Crotons in pots lend themselves to the production of fine effects in massing for colour.

When planted in pots or boxes, these should be banked up with grass in the winter, for the *roots need protection from the cold*. Public gardens in the Bengal, Madras and Bombay Presidencies will supply you with plants or cuttings, and the Royal Botanic Gardens Ceylon, sell them at the wonderfully cheap rate of Rs. 2 per dozen plants. Don't forget that all your operations, planting or transplanting, are best performed *in the rains*.

The botanical name of croton is *Codiaeum*. I mention this so that you may be prepared for the ultrawise person who may endeavour to score off you by enquiring if you know the *real* name of croton.

Very delicate and rare plants may be propagated by the “gootee” instead of by cuttings. This is done by taking a ring of bark off the stem, and tying a pad of

damp moss on it. This pad must be kept constantly wet by the drip from a suspended pot full of water.

### **Cyanotis.**

VARIOUS species of cyanotis are common weeds of cultivation, especially in the rains, and in irrigated land. They are of a wandering, succulent habit, with delicate blue flowers. The common species is invaluable in rockeries, and covers over ugly bare spaces at once. It does not require any attention, for it has wonderful vitality, and accommodates itself easily, almost too easily, wherever it is stuck in. In any shady place where a quick border is wanted, it looks very nice indeed, if you will pin down the cyanotis with pins of wire, and keep it growing in the right direction. You can't do without it in your conservatory, for its brown striped leaves make a pretty setting for many things there. It makes a capital ground-work in baskets where you wish to arrange pink, red, or scarlet cut flowers. People who prize it sufficiently to grow it in glass-houses in Europe would be surprised to see how common it is in India. (See "Hints.")

### **Cyperus.**

VARIOUS species of cyperus are to be found in marshy spots everywhere in India. One of these is a pestilent weed of all tropical and subtropical land, namely, *Cyperus rotundus*. It has various vernacular names, *Lavala* and *Nagarmotha* being two of them. Some of the larger species of cyperus are quite decorative. The roots should be dug up, wrapped in damp moss, grass, or leaves, and transplanted into a moist pocket of earth in a rockery, or on the bank of a pond.

*Cyperus alternifolius* is a large handsome plant sold by florists under the names of umbrella-palm, umbrella-grass, or similar names. It is neither a palm nor a grass, of course, but it has somewhat the effect of a dwarf palm.

For this species as for others (except that all-too-hardy *Cyperus rotundus*) the soil must be constantly moist. If the plant is grown in a pot, this is easily arranged for by having the pot set in a shallow earthen tray containing water.

*Cyperus* species are propagated by seed or by the division of the rootstock.

### Dodonea

ANOTHER "common thing," but how beautiful and how useful! It will form a thick evergreen hedge which is just what you want for that *outer enclosure*, which is to guard the ground you are going to make into a flower garden. *Dodonea* is found wild in dry hot parts of India and hence, as one might expect, will get on with little water in a garden. But, naturally, like many of these dry-land plants, it has no objection to a more liberal water-supply, and increases in size and vigour accordingly. To make a hedge of it, dig the ground where you propose to place it to the depth of a foot and the breadth of  $1\frac{1}{2}$  ft. during the hot weather. Make a slight ridge along the edges of this dug line to keep in the rain water. Sow seeds in quincunx fashion in two rows, the space between each seed being 1 ft. and the space between the lines 1 ft. The seed of one line should come opposite the space in the other. It is as well to put in two seeds instead of one at each planting hole. Push them about an inch into the soil and press it down on top, protect with some spiny branches till the young plants reach 1 ft. in height. Cut back persistently to ensure a good filling up of the basal part of the hedge. The new leaves that sprout along the pruned branches form a velvety, bright green surface, that nothing can surpass in freshness. If you take my advice, this will make the best emerald framing for your garden. If you already have a hedge of it, so much the better: only see that you fill up the *gaps* with fresh sown seed at the break of the rains. In the hot weather your "common" *dodonea* will bear abundant bunches of pale green seed-vessels, which you will find a very refreshing-looking

decoration for your vases and baskets, or used as garniture for any pink, white, red or yellow flowers. Large bunches of it tied up form a pretty change from the dried grass bouquets we often tire of.

### Dracenas

ARE foliage plants well worth cultivating. They have an immense number of varieties, but as you are only a beginner, ask for the *robust* kinds first; later on you can get those that will need a little attention. They grow easily from cuttings; give them a *free* soil, that is, a good many crocks at the bottom of their pots, and some sand and powdered charcoal added to ordinary garden soil. When your pots have a number of new shoots coming up all round the old plant, wait till the rains begin, then turn out the contents of your pots, separate the new shoots, planting each in a 10-inch pot, sinking the stem into the soil right up to the lower leaves. These lower leaves that touch the surface of the soil will fall away by-and-bye, but the others will expand and increase into a beautiful torch-like form. The old original plant, which has probably grown into a long, leggy stem, several feet high, cut into pieces about nine inches long and plant in boxes as cuttings for next year. If you wish your *new* shoot planted in the 10-inch pot to grow bigger, transplant it the following year into a bigger pot. Sink some of these pots into your rockeries, and as the hot months will try them, they will be all the better if you can dip the top of the plant into water, or hold the pot horizontally over your reservoir and pour a good stream of water over the leaves to give them a bath. This sort of bath is specially good for the pot you keep in verandahs. Dracenas tolerate being kept indoors as decorations for living rooms for quite a long time. *They will not bear frost*, so keep them sheltered in the cold months.

### Duranta

Is a hardy, large flowering shrub; well worth having. If you haven't any, send for cuttings in the rains, and



plant in clumps in your shrubbery or make hedges of it. For hedges plant the cuttings (of well ripened wood, 8 inches long) in the manner and at the distances recommended for the seeds of *dodonea*. They will grow in most soils where they will get plenty of sun; but will not tolerate water-logging, and they grow very poorly if grass and weeds are allowed to form a mat around them. In good conditions a seven-foot hedge can be secured. The hedge will want pruning; but those grown as shrubs need not have more than the extremity of their branches cut away in cold weather, only to form them a little into shape. One variety has light mauve flowers in large sprays; as these flowers fall, bright yellow berries form, which, when cut and used for indoor decoration, last a long time. This variety is very hardy and needs little care after it is established. The variety with white flowers is very pretty indeed and most useful for bridal decorations. (See "Hints.") This white flowering variety does not grow quite as high as the mauve, and wants a little more water in the hot weather. When slightly pruned in winter it keeps in good shrub form. You will, I am sure, be delighted with it, and with the variety of decorations to which it lends itself.

**Eglantine.** See "Sweet Briar."

### **Everlasting**

THE French "Immortelle," gives no trouble to cultivate and as it is very useful in dry grass bouquets, plant some of it in one or two small plots in October, just where you intend it to remain. Make holes with your finger, six inches apart, and drop two or three seeds into each. The flowers keep in bloom for months. Those which you intend to use in your dry bouquets should be cut when they have fully expanded. Send to Suttons, Calcutta, for a packet of *Helichrysum*, large-flowered, mixed. Save the seeds of the different colours, and dry in loose muslin bags before putting away in bottles. (See "Hints.")

### Ferns.

EVERYBODY loves ferns, and everybody is anxious to have around them as many as possible of these refreshing ornaments of the forest glade. In Pliny's time ferns were considered of mysterious origin, for he says of them: "They bear neither flowers nor seed." In later years the idea was that fern-seed was visible only on St. John's Eve (Midsummer, *i.e.*, 24th June).

" But on St. John's mysterious night  
Sacred to many a wizard's spell,  
The hour when, first to human sight  
Confest, the mystic fern-seed fell."

Ferns are put down to January 29th and February 24th, and are devoted to St. Ethelbert, King of Kent, St. Marcella, 410, and St. Francis of Sales, 1622.

Ferns will grow very well in the plains of India if you know how to take care of them. Year after year you see people coming from the hills with baskets of lovely ferns because they are under the impression that ferns, like geraniums, should be renewed by fresh stock from the mountains each successive season. A cruel mistake! To send out *jampanies* and coolies in all directions to wrench off and dig up ferns ruthlessly from their natural homes, and bring them to starve and die in the plains, is a barbarism that makes one shudder! As you are a beginner,—and I don't pretend in this little work to give you more than the rudiments of simple flower-gardening,—the most we can hope for with regard to ferns is that if you follow my instructions, you need not have on your conscience the sin of killing all the ferns you take in hand. August and September are the best months for bringing down ferns from the hills. Some of the kinds you see won't live in the plains, so if you can't recognize those that will bear being transferred, you will surely have some friend who will be able to tell you which are *Adiantum*, *Lastrea*, *Cystopteris*, *Polypodium* and *Blechnum*. Most of these will thrive down in the plains. Ferns are of two kinds, those that go

to rest in the summer and those that remain green all the year round. I will suppose you have no friend to tell you the classes of the ferns, so you might guide your choice in a small way by remembering one or two points about those you ought and ought not to bring away. The larger kind of ferns with *brown, hairy stem*, as a rule, does not like the plains, so choose those with stems that have silvery white hair and those whose stems have no hair at all. Then there is another class you must avoid, and that is very *fine, lace-like ferns*. These also won't bear living away from their mountain home. When you search for ferns and come across any creeping variety you may safely take it up. Now take notice what is meant by *creeping ferns*; those that let their leaves curve over and take root from the tip or point, are pretty strong, and some of these are found in the plains, especially two, *Adiantum lunulatum* and *Adiantum caudatum*. In jungles that are shady and swampy you will be sure to find some beautiful varieties of creeping ferns, the best of which is *Goniopteris proli-fera*, which will stand all weathers and provide you with the most elegant hanging baskets. The few ferns I have mentioned are to be found *all over India*. Collect your ferns in the afternoon (I mean those you intend to bring down) and leave them in the dew or rain all night; in the morning *shake* from the roots as much soil as will come off by shaking and pack them close together in a basket in layers, putting between the layers a light sprinkling of shreds of moss. Shut down the lid of the basket. In this manner, during the rains, your ferns will stand a journey of forty-eight hours. When they have arrived at their journey's end, get ready their pots and trays in this way: the pots should be well washed and the holes below should be opened properly; then small pieces of brick, about the size of hazel-nuts, filled in to almost half the depth of the pot; over these put a layer of coir fibre or old moss; then fill up to within an inch of the top with soil composed as follows:—Three parts leaf-mould, one part powdered charcoal, two parts *kunkur* broken up to the size of peas. Let this soil settle by sprinkling well with water. Your pots should be from five to twelve

inches wide, according to the size of your ferns. In your trays, which should be lined with perforated tin at the bottom, you won't need more than one layer of brick, since the depth of the trays is not more than five or six inches (see "Trays and Stands"); then add the coir and soil as already explained.

Now for the planting of your ferns. Have by you a tin of clean cold water, and as you take each root of fern out of the basket, cut away the bruised leaves and put them on one side, plunge each root into the cold water *for an instant only*, then place it on the top of your soil which is ready in the pots and trays. When you have thus disposed of all the roots, turn to the fronds, or leaves which you have put aside; break up these into small pieces and spread over the roots that are still exposed on the surface of the soil. When you have covered up the roots with their own leaves, then add a layer of about half-an-inch of soil, and in the hollows left between the roots, put bits of *kunkur* and charcoal. It seems rather a troublesome process, but you will be rewarded by soon seeing new fronds peeping out. At first you must water these newly-planted ferns three times a day, and after they have established themselves, twice a day will be sufficient. With "maiden-hair fern" you must have something extra, that is, small *gurrahs* of water should be placed on your trays before you put the soil on, and the fine lacy rhizomes, or roots of the maiden-hair, should be spread over the sides of the *gurrahs*, and kept in their places by the weight of the *kunkur* and charcoal placed here and there.

"Silver fern" you know very well. This again has another kind of treatment. To the soil already mentioned, add a little sand and powdered *old lime*. Silver fern likes a dark place, so put the pots they are in under some overhanging shade. Silver fern grew with me to a height of eighteen inches under this treatment. I kept their pots in grass cylinders three feet high, so they were always cool in their grass-house, and got light *only* from the opening at the top of their house.

In the winter the ferns of the first class will go to rest. Remove the pots to the shade of a hedge where they will be thoroughly sheltered from the cold; tear up some moss, and spread a thick lace-work of it over these ferns. The dew in the winter will supply sufficient moisture in the air for them. In the hot weather water *very sparingly* once a fortnight. If these ferns are in health, they will all sprout again on the approach of the rains. Don't throw away any fern as dead until you have tested its vitality for a year. If under all your care it shows no sign of life in that time, then you may say *good-bye* to it. Keep your ferns where they will be *quite sheltered from wind and sun*. They like air and rain, so an open-air conservatory is the place best suited to them. *Blechnum boreale* is a fern I strongly recommend; buy a root of it from the nearest public garden. It is perfectly hardy and spreads itself in a marvellous manner. Those in fountains in the Crawford Market in Bombay are an illustration of their name—the “hardy” fern. I have this fern, and maiden-hair, etc., in trays in my conservatory, standing in the same place in all weathers from one year's end to another, growing in the utmost luxuriance. They are at their best in winter. *Blechnum boreale* and *Adiantum caudatum* (creeping fern) are very good for hanging baskets, and if planted on the top of the brick pillars I have described (see “Stands”), they will throw out their sprays, which, if pinned into the cavities all round the sides, will soon entirely cover the pillars.

Your evergreen ferns will languish a little in the hot weather; never mind, give them plenty of water, three times a day if you can, and *leave them alone*. They will all come right when the rains set in. *Transplanting ferns in the hot weather means “sudden death.”* The monsoon is the best time for all your fern work. Have, if possible, two sets of ferns—one set to keep undisturbed for show and decoration, the other as a resource to be drawn upon for making new boxes and baskets. All the ferns I have told you about increase and multiply tremendously: so if you have no second set of ferns in reserve you can easily abstract a root here and there from your

“show,” without any visible gaps. Caterpillars are very troublesome enemies of ferns. Dry ashes sprinkled plentifully are the only protection against them, and fumigation, which you will find described in “Hints.” For drying and wiring ferns, also see “Hints.”

If you wish your ferns to look perfectly healthy and bright, you must superintend the planting and transplanting of them yourself, for, as a rule, malis do not understand ferns. A bachelor friend of mine, fond of gardening, went to a good deal of trouble and expense to keep his garden nice and had a capital mali to look after his plants. The mali really took a great interest in everything committed to his charge, *even ferns*. When the gentleman saw *my* maiden-hair fern, he said: “Good gracious! What do you do to make your ferns grow so well? *My* maiden-hair fern will not grow beyond an inch or two.” The next morning this mali was sent to me with a basket of his ferns to have the mystery of their backwardness explained. There was a very good basket eighteen inches deep, and there was a *gurrah* of water, and there were signs, and signs only, of maiden-hair fern, fern that the mali in his excess of devotion had buried beneath a foot of *pure cow-dung* for soil! If you don’t watch your mali, *he* also will manure your ferns, and they will at once perish.

### Geraniums

ARE very easily propagated by cuttings. In fact, it is possible to get cuttings to root by planting them directly into garden beds where they are wanted. But it is better to “root” them in the usual type of well-aerated soil (half leaf-mould, half sand) in boxes or pots and then transfer to the beds or pots where they are wanted. Tip-cuttings are best. Do not remove the leaves. Let the young cuttings have plenty of intermittent splotchy light such as is available under the outer branches of a feathery-leaved tree. Don’t over-water the soil, or the cuttings will rot. After transplanting, shade lightly with feathery leaves for a day or two. The

gradual decay of the leaves will harden the plant to the sun. Geraniums are a perpetual stand-by for the dry season, and either in pots or in the soil, will provide colour for your surroundings if protected from the midday sun. Plants in pots can be used indoors for a day or two at a time, but don't keep them too long away from the light.

The ivy-leaved type is excellent for hanging baskets. The zonal type is particularly useful where mass effects are wanted. The proper name of all these is *Pelargonium*, not Geranium. A plant very like the *Pelargonium* is found wild in some parts of India. It is called *Monsonia senegalensis* and looks like a *Pelargonium* run wild. On the plains in places with under 40 inches rainfall propagation is best done in the rains, in other places in October. On the hills propagate as the weather gets warmer in spring.

**Gilliflowers.** See "Pinks."

#### **Grasses.**

MANY of the wild grasses are decorative. Species of wild *Saccharums* (same genus as the sugarcane), found on river banks, can be grown beside tanks and water channels with excellent effect. Transplant clumps of them, roots and all, early in the rains. Many species of *Eragrostis*, such as *E. amabilis* and *E. tenella* variety *plumosa* found wild in the fields and often as weeds in the garden, are most graceful and can be employed with cut flowers for vases and bowls. *Tricholæna rosea* is a reddish grass easily grown from seed that is very decorative in the garden or with cut flowers. *Pogonatherum* is a very pretty grass found in the hills. It has something of the character of bamboo, but its stems, instead of being stiff and upright, are slender and supple, like thread, and its fine, elegant sprays grow about three feet long, and droop over most gracefully. If you can't get anyone to show you which is *Pogonatherum crinitum* when you are in the hills, perhaps you will be able to find it out from my descriptions, if not you can buy a pot of it

from a Government garden as I did and so learnt its name. It keeps beautifully green and fresh through the rains and cold weather ; in the hot months it dries slightly here and there, but not enough to make it look unsightly ; in fact, it never dies. Plant it in shallow boxes and pans ; soil—leaf-mould with a sprinkling of common earth and sand. Keep in entire shade, and well raised from the ground. In a porch facing east I had two boxes of it on rustic stands, and as I watered it three times a day in the hot months and twice a day during the rest of the year, it always looked like a refreshing green waterfall ! In my conservatory I have flat pots of it stuck in forks of trees, a place it loves to grow in, in boxes on stands, etc., a veritable “thing of beauty.” You will find your pots, etc., very soon fill with roots, so in the rains divide these, putting three small bunches of roots into each new pot. It likes plenty of water from the top ; give it light, *but no sun*

Grass means *utility*, and St. Timothy, A.D. 304, is the only Saint to whom the Calendar devotes it.

### **Grevillea robusta**

THE Australian “Silver Oak” is a king among foliage shrubs ! Let me recommend your procuring at least two of these to plant in the corners of your lawn furthest from your house, or in two shrubberies on either side of your carriage-drive. If you don't already know it, here is Firminger's description of it :—“A most noble object, handsome at all periods of its pyramidal growth, with beautiful dense foliage of fern-like, rich dark-green leaves.”

At public gardens you can buy small plants of *Grevillea robusta* for a few annas each. I bought one for six annas, and planted it in the centre of the front lawn of the Shahjehanpur City Dispensary, and in the third year of its age it was in splendid condition and twelve feet high !

If your station has frosty nights in the cold weather, your *Grevillea robusta* ought to be protected during its first winter, after that it does not come to any harm.



Water well during the hot weather. It is propagated by seed ; but I have never tried growing it from seed, as the plants are so cheap.

In warm, moist stations in the South of India it will grow without the least trouble and makes beautiful pot-plants.

It is worth remembering that although it makes an attractive pot plant and a graceful shrub, it is really a forest tree. If allowed to grow in favourable situations such as at Coonoor in the Nilgiri Hills, it becomes a tremendous pole of up to 100 ft. high.

### **Gypsophila**

Is really a weed found in Northern India, but cultivation has made it a most desirable addition to our annuals, and as an elegant garniture in floral arrangements you will be charmed with it!

Send to Sutton & Sons, at Calcutta, for seeds of *Gypsophila paniculata*, and sow in October just where you wish it to grow, as it will not bear transplanting. The flowers are white, borne in myriads on fine, grass-like, branched stems, and if you sow a little patch five or six inches across, it will produce a lovely bush about a yard high, and nine feet in circumference ; you must remember this when deciding where you will grow it.

Scatter some of the seed in a bed of mixed poppies, such as *Papaver alpinum* and *Papaver nudicaule*, and the result will be what Whittier calls :—

“ An added beauty to the earth.”

*Gypsophila elegans* is another excellent species with a pink variety.

### **Heliotrope**

OR “ Cherry pie,” can be grown most successfully in the plains under one very simple condition, that is, keeping the

bed in which it is grown, raised at least eighteen inches above the level ground. Don't attempt to grow it from seed. Buy a healthy pot of it in November, and on a sunny site, make a mound quite eighteen inches high, of ordinary earth, to which add a small basketful of leaf-mould and one of powdered bricks. Bank up your mound with *kunkur* or *rori* (burnt pieces of brick from the kiln),—sink your pot of heliotrope just as it is into the middle of the mound; it will rapidly throw out branches in all directions. Catch these down by placing pieces of brick on them, taking care to first place a handful of soil on that portion of the branch pressed down under the bit of brick. Branches pinned down in this way in November ought to be well rooted by the end of January. Cut them away from the parent stem and plant where you wish them to grow; but remember that unless you raise their abiding place, in the way I have described, and give them good drainage, they will probably all perish during the following monsoon. Young plants should not be planted out later than the first week in February.

It may help you to know how I managed mine. At the beginning of one November, I bought a potted plant from the public gardens at Aligarh, and planted it in the centre of a high mound. The first season there were layers from this one plant enough to stock a large raised bed; then from this bed the following year layers were taken to form two hedges along my lawn. Nothing of all this heliotrope is lost. Year after year it grows through all the rain, secure in its high place from *water-logging*, which is its one great enemy in the plains. Prune away at the end of the rains all branches that look shabby. These will take root if you plant them in a shady place.

Heliotrope is a native of the Cordilleras of Spain, where it was first discovered by the great French botanist, Jussieu, who was attracted to it by its strong perfume. Struck by the peculiarity of its turning its flowers to the sun, he gave it the name of Heliotrope and

sent some of its seeds to the Royal Garden at Paris, where it was first cultivated in 1740. As the Calendar of Flowers was compiled long before that event, Heliotrope, though it means *devotion*, is not to be found dedicated to any saint. (See "Hints.")

### Hibiscus.

OF this splendid flowering shrub there are many varieties, but I specially recommend the following as most effective and beautiful. *H. mutabilis*, flowers single or double, changing from white in the morning to brilliant red in the evening; *H. syriacus albus*, flowers very double, of the purest white, more compact petals, but not so large as the preceding; *H. rosa sinensis*, perhaps the most beautiful of all, flowers large, single bell-shaped, and of a rich Chinese red. These three can be propagated with the greatest ease by cuttings during the rains, and cuttings of *H. S. albus* flower beautifully the following year.

*H. mutabilis* is sometimes called the "Changeable Rose," and in parts of America is known as the "Cotton Rose" or "Confederate Rose." It is, of course, not a rose at all, but is closely allied to the hollyhock. *H. syriacus* exists as a single flowered variety of a blue colour common in Indian gardens. The double white mentioned above is more showy. *H. syriacus* was so named by Linnæus, who believed its native land to be Syria, and the common name, "Rose of Sharon," apparently arises from the same belief. But, alas, for such delightful ideas, it is now probable that China is its country of origin. Of *Hibiscus rosa sinensis* there are now an enormous number of varieties of many colours. A great many of these are double or partially so. The single varieties are, to some people, more attractive, and certainly the original red single variety is a magnificent sight when in bloom.

*H. schizopetalus* is a beautiful African species that grows well in India. It is so named because the recurved petals of the delicate hanging flower are fantastically cut and slit. This species likes semi-shade. Heavy

water-logged soils do not suit hibiscus, but they flourish in rich deep soil, and will also get on where the soil is much poorer.

In some parts of India during the coldest months of winter the hibiscus is given to shedding its leaves. At this period or after their main flowering season prune them to half their height, and put down the cuttings in any place sheltered from frost. Cuttings may be taken from any part of the stem, old or young. Rooted plants must be placed where they will have sun, else they won't flower well. Remember to have some of these in your reserve plot, as they form a very valuable addition to the list of cut flowers for decorative purposes. Many people regret that the hibiscus shuts up so quickly after being plucked, but in "Hints" you will find a method of keeping them fresh for evening decoration.

A large red and black beetle is a great enemy to the hibiscus. There is nothing for it but to keep picking them off in the mornings and killing them till they entirely disappear.

The native names of hibiscus are *gurbul jaswand* and *juva*. The Calendar marks the 5th December for this flower, and it is dedicated to St. Crispina, 304 A.D.

### Hollyhock.

THIS is a very old-fashioned flower, but they are now produced in fine double forms, and in such lovely shades of colour, that you really *must* grow some in parts of your garden where you require tall flowering plants. In places with below 40 inches rainfall and a moderate temperature, sow any time from June to November. In other places sow the seeds in October, and when they have developed three or four leaves, transplant them where you wish them to grow, placing them not less than two feet apart.

When the flower-buds form, snip off some from the crowded stems, and cut away the side branches and grow only the centre, single spike. (See "Balsams.") They want sun, and a rich soil, so when about to flower, give

them a little liquid manure once or twice a week. (See "Hints.")

The hollyhock is an ideal plant to use as a backing to showy borders, or in scattered groups. A solid border of hollyhocks is wearisome to the eye. The plant is beloved of bees because of its copious pollen and hence crossing takes place freely. Seed saved in your garden is likely to be hybrid and may give you any colour at all next year. If you are keen on getting a special colour in a given place there is nothing for it but to buy seed of that colour each year from a dealer.

### Honeysuckle.

THERE are several kinds of these, but the Japanese one (*Lonicera japonica*) is what will best reward you with deliciously scented sprays of white and yellow blossoms. If you get one good rooted plant, place it where it will get plenty of sun, and give it the same soil as that mentioned for roses. Almost every house has *jaffery* screens erected at bath-room doors; if these are strongly supported, the honeysuckle is just the creeper for it, as it loves soap-water. I have a *jaffery* screen extending along the south of the house, covered with a glorious tangle of honeysuckle and Marechal Niel roses. These creepers of scent and beauty get the water from the servant's pantry and wash-up and grow with the greatest vigour in consequence. Get some of it for your garden. If grown in the centre of a bed a support in the form of an umbrella suits it. I inserted four iron rods, four feet long and three-quarters of an inch thick, round a honeysuckle, and put a shelf of bamboo lattice on the top, to which the creeper was helped up with twine. It very soon spread over the flat surface. The top flat surface enables it to get a good deal of sun. The more sun it gets the better does it flower.

The scent of honeysuckle is a scent peculiarly its own. It flowers almost all the year round, filling the garden with perfume. (See "Hints.") Propagate by layers as you do heliotrope. The new shoots sent out near the roots are the best for layering. They will strike any time from July

to February. You can't have too much of this delicious creeper, which means *generous and devoted affection*. (See "Scent Sachets.")

### **Inga dulcis or Korkapillee**

THOUGH another "common thing," is not to be despised. Sow your seeds during July and August and follow instruction given for *dodonea*.

It will grow into large trees if you will allow it, and grow very quickly too. A small grove of it, with a hedge of *dodonea* or *mehndee*, is what you will find invaluable for your work-yard, if you have no other shady or retired place to keep your seedlings, and do your potting and transplanting. It gives an equable shade all the year round, slightly more dense than *casuarinas*, but not dense enough to shut out sunshine altogether. In the cold months the leaves, on its long, regular, narrow branches have a beautiful purple bloom, like the bloom on grapes, and these branches are useful in many ways for decorations. *Inga dulcis* sown as a hedge develops into a compact mass of branch and foliage, ideal as a protection against man, beast or wind. If kept from spreading laterally it can be built up into a solid wall of greenery twelve feet high. To get this effect, plant seedlings in quincunx fashion in two rows 2 ft. apart, with a water channel between them, and seedlings at 1 ft. apart in the rows. (See "Hints.")

### **Ipomea palmata**

THE commonest, yet the most useful of evergreen creepers. You see it at every railway station, refreshing the eye in the hottest weather with its bright, fresh foliage, and well deserving its nicknames of "Railway creeper" or "Porter's joy." There is one variety with purplish and another with white flowers. Make cuttings nine inches long and plant thickly in any soil where you wish them to remain. The monsoon is the best time to do this, as they will then need no watering. The cuttings will take at any time

of year, but must be watered if put down after the rains. Of all creepers, this grows most quickly. It is excellent for conservatory screens but should be thinned where it becomes too dense, especially when it has reached the top of its support. If grown round posts or pillars, it must be tied in to keep it in compact tidiness. This *Ipomea* will spring up again in all its original vigour even if the plant is cut level with the ground and only a stump left. Seeds of the pretty white *Ipomea grandiflora* should be sown in the rains. This is the so-called "Moonflower." It is a most interesting thing to watch the opening of its scented white blossoms in the evening. They open in about 10 minutes from the start of their unfolding. This plant is propagated by seed. *Ipomea quamoclit* is a striking creeper with brilliant red flowers, and so is the common *Ipomea coccinea*. *Ipomea carnosia* has pink flesh-coloured flowers, and is a shrub that stands considerable neglect.

### Ivy

*Hedera helix*, will grow very well in the plains if you know how to treat it. If you are going to bring ivy down from the hills, choose good, stout bits of root; never mind if the leaves don't look fresh and bright, for they must, in any case, all fall when the ivy is transplanted. Wrap up what you select in damp moss, and keep the moss damp during its journey. It will travel quite well among your ferns (see "Ferns"), and on arrival, should be plunged into water for an instant and then planted at once on leaf-mould in which there is plenty of broken bits of *kunkur*. You will notice I say *on*, not *in* the soil, for the stem should always be on the surface and kept down with small pieces of brick. It will root quickly in the rains, and this is the only time of year you should attempt to bring it down to the plains.

Your rockeries will be the best place for it, and you will find it grow in and out of the rock-work and find its way to the tree or trees round which you have built your rockeries. It may then be guided into place with tacks and tiny bits of tape, or left to climb the tree at its own

sweet will. The twice a-day watering of the conservatory will be quite enough to keep the ivy damp, and it will reward all your trouble and make a charming variety in your rock-plants, protected here from its chief enemy, the hot wind. A quantity of ivy in my rockeries, planted close by the kerosine tins filled with water—(see “Conservatories”)—turned some of its young shoots over the edge of the tins and remained immersed in the water all through the hot weather without harm.

Ivy puts out its new leaves in the rains, and these keep beautifully fresh and bright through the winter. In the hot weather it makes no growth, and if you see it looking rather withered, don't think it is dying; leave it as it is. The rains will prove its vitality. If you attempt to transplant it during the hot weather, it will perish completely. If you come across some particularly well-coloured or clear-veined ivy you wish to make the most of, strike new cuttings according to the method described in paragraph “Delicate Cuttings,” but first put some powdered charcoal in the cotton wool. In the hills, you can do this from March to September. On the plains, during the rains only.

Ivy means *friendship*; the Calendar devotes it to St. Paul, the first hermit, and it is used to mark the 15th of January.

### **Ixora**

NATIVE name *Rookminee*, is an evergreen shrub which is very desirable to have in one's garden. There are several kinds, but three kinds will be sufficient for you to begin with: *Ixora coccinea*, with scarlet flowers; *I. rosea*, flowers coral pink; *I. alba*, flowers white. Send for rooted plants in the rains. They keep in flower all the year round, but are at their best in September and October, and as the blossoms when cut do not fade quickly, they are a great addition to your list of cut flowers. Plant in full sunshine in any common soil, to which a little cow-dung should be added. When the plants are old, thick and



woody, the suckers round about should be removed and planted elsewhere. These, put down in fresh soil, will bear flowers much larger than the old parent stock. If you have a great number, put some near your well, or your stables, for, when once rooted, they need no care. In November cut all straggling branches and prune them into shape. (See "Hints.")

### Jasmine.

" My slight and slender Jasmine tree,  
That bloomest on my border tower,  
Thou art more dearly loved by me  
Than all the wealth of fairy bower.  
I ask not while I near thee dwell,  
Arabia's spice or Syria's rose ;  
Thy light festoons more freshly smell,  
Thy virgin white more freshly glows."

LORD MORPETH.

India, the home of the jasmine, has many kinds of this sweet flower, but three kinds will be very nice for your modest garden. *J. angustifolium*, the foliage of which is very showy and a beautiful sight when in full bloom in the hot weather ; *J. officinale*, elegant and graceful both in foliage and flowers ; *J. syringæ folium*, very ornamental in the garden with its constant profusion of star-like blooms. (See "Hints.")

These grow readily from cuttings, layers, and suckers, which should be planted early in the rains in common soil, enriched with a little manure. When they have once established themselves, they need no attention. *J. officinale* is very desirable over a porch, and, if grown as a creeper, should not be pruned ; but all the three I have mentioned should be pruned just before the rains, if grown as shrubs.

*Jasminum malabaricum* is the jasmine that flowers so abundantly in the Mahableswar jungle during the hot weather.

The jasmine was taken from India to Europe by Spanish navigators in 1560. It means *amiability*.

### **Kuronda or Kurwunda**

Is the native name, and *Carissa carandas* the Latin name, of a common shrub. It forms a bushy shrub, like *ixora*; the blossom is of no particular value, but the fruit is lovely!

The berries appear in small bunches in the rains, and look as if they were made of wax exquisitely tinted, from the purest white, through shades of brilliant scarlet, to the richest ruby. The bushes when loaded with this most uncommon fruit form a sight, the charm of which is not easily forgotten.

There are two kinds of kurondas—the pink and the green. The former is what you must ask for: the berries of the latter change from green to black, are round, and cannot in any way be compared with the perfect oval of the pink kind.

They are propagated by seed and rootlets, and should be planted in the rains. Water occasionally during their first hot weather, after that they need no attention. Plant in your shrubberies, or in one or two small clumps by themselves; prune after the fruiting season is over.

The plant is provided with formidable thorns and a hedge of kuronda is a considerable obstacle to trespassers. The fruits are useful for preserves.

### **Lagestroemia Indica**

Called by the natives *Gool Fanoos*, is one of the most beautiful of shrubs, and I know none more easy of cultivation. There are three colours—white, pink and mauve—and all can be propagated by cuttings from July to November. They need no special soil and no special watering beyond the first hot season. Plant by carriage-drive or shrubberies, pink and white alternately, but keep the mauve in groups by itself. Some of the white and pink should be planted *singly* in the centre of flower beds, and, after flowering, these should be pruned down to within eighteen inches of the ground in November, or when they

begin to shed their leaves. Tall annuals like poppy, cornflower, etc., may be planted round to hide the bare stumps during the cold season. In the hot weather the *lagestrœmia* puts out its refreshing green leaves, and then from May onwards it is in glorious bloom.

The single ones in beds will throw out their long graceful sprays of bloom, the tips of the lower ones drooping over almost to the ground. Those in the shrubberies need not be pruned lower than four feet. Make use of all your cuttings, of the white especially, for you can't have too much of this in your reserve plot, etc., to supply continuous demands for table decorations and to prevent the mali gathering the blooms from those shrubs you wish to show in all their glory. (See "Hints.")

*Lagestrœmia Flos—Reginæ* is a species with larger and more showy flowers, mauve in colour. Propagated by seeds.

### Larkspur

Is a pretty purple annual you must not go without. In places with under 40 inches rainfall and a moderate temperature, sow in June or July; in other places, sow the seeds in October where you wish them to remain, as they won't bear transplanting. Patches of it here and there, in the space forming the border of your lawn, will add to the variety of colour. Remember to plant it rather in the background among your annuals, because it grows tall, sometimes between two and three feet high, and must not overwhelm the low-growing annuals like phlox, pansies, etc. Ask Sutton to send you a packet of the lovely seedling *Belladonna* variety. This is of a decided, uncommon *sky-blue*, and should not be planted near the purple, but by itself, or in the middle of small beds with borders of low annuals of harmonious colours. Save your seed by plucking and drying the fully ripe pods. Larkspur means *lightness*.

### Lilies. .

"The Lily's height bespoke command—  
A fair, imperial flower;  
She seemed designed for Flora's hand,  
The sceptre of her power."

Under the head of lilies I include *Amaryllis*, as most amateurs call them lilies. I strongly recommend these bulbous plants, as they are easy to cultivate, their blossoms are specially beautiful and graceful, and their colouring most varied. As you are a beginner, I shall mention only a few you may take up with confidence and satisfaction. *Polianthes tuberosa*, the most common of lilies in India; *Eucharis amazonica*, an exquisite pure white lily; *Hedychium coronarium*, a lovely, deliciously-scented lily; and different kinds of *Alliums* and *Amaryllis*.

Leaf-mould with a little sand is the soil almost all lilies thrive in. Plant your *P. tuberosa* either in pots or in the ground. If you have room, they look well in the border behind your *Zephyranthes* (see "*Zephyranthes*"). They flower in the rains. Cut down each flower-stalk after the flowers are over. If the winter is severe, the leaves also will die down. Those which you grow in pots may be moved into verandahs; stop watering them when they go to rest, and begin again when you see green blades appear above the surface of the soil. At the beginning of the rains you should separate the bulbs, which you will find have greatly increased. When the flower spathes begin to form, a little liquid manure at the root will do them good.

*Eucharis lilies* won't grow in the sun, though they like plenty of light. Plant them in your rockeries, and in pots at the beginning of the rains, and give a little liquid manure when you see they are about to flower, and stand the pots in saucers of water. Let the pots remain standing in water till in winter you see the leaves turning yellow, then remove them to a corner of your work-yard, where they will be protected from the cold, and bury the pots up to their rims in the ground, or bank earth round them. Water *slightly* once a week while they are at rest. As soon as the weather becomes warm, take up your bulbs and plant one in each pot: you will find they have multiplied tremendously. As soon as the new leaves begin to show, water them every day. The leaves ought to grow to a good size and look strong by the time the rains begin, when

you must *again transplant them*, and stand the pots in water. Don't use manure till they begin to show signs of flowering, and then only a little, for too much will prevent their flowering.

If you do just as I have advised, you will find that, in two or three years, you will have more *eucharis lilies* than you know what to do with!

The *Hedychium coronarium* when in flower in the rains is, as a friend of mine called it, "*a perfect poem.*" It may have been the beauty and perfume of this lily that inspired Heine to say:—

"I will steep my fainting spirit.  
 In the Lily's calyx pale.  
 The lily in tones that stir it,  
 A song of my love shall exhale.  
 That song shall vibrate and shiver,  
 Like the ever-remembered kiss,  
 That from her lips on mine did quiver,  
 In hours of divinest bliss."

The tubers of this lily are like rough ginger roots, and spread out vigorously. Don't bury the tubers too deep: one tuber in a 12-inch pot, with an inch of soil lightly sprinkled over, is sufficient. Do this in the hot weather, and keep your pots in the shade. Water them every day, and when the leaves are six or seven inches high, stand the pots in saucers of water. During the rains there will be several stems of flowers sent up in succession from each pot, and each stem will bear a head of buds which will open from three to ten at a time, perfuming the whole of your conservatory deliciously. Cut down each stem after it has done flowering, and when you see no more new stems coming up, take the pots out of the water and place them under a hedge, where they will be protected from cold at night, and yet be able to get warmed by the sun in the day. As the weather warms, the tubers will begin to sprout; turn them out of the pots and separate them. Do this by cutting them with a sharp knife into pieces four inches long. *See that each piece has some root*, and then proceed as above instructed. If you find

that your pots are *full* of tubers by August, you may safely separate them again. This lily does not do well in the ground.

The Lily means *majesty*. *Lilium candidum* is devoted to the Virgin, and marks the 2nd<sup>o</sup> of July, and fourteen other kinds of lilies are devoted to Bishops and Saints in the Calendar. [See Carlo Dolci's celebrated picture at Munich.]

*Amaryllis* are beautiful lilies for both ground and pot culture.

The Government Garden at Lucknow supplies them. Send for a few of each kind at the end of the winter. Those for the ground should be planted in rather a protected part of the garden, where they will get the sun for only a small part of the day; those in pots, place in most open part of your conservatory, and on the edge of your verandahs.

Some will flower in the hot months, some in the rains; all will go to rest at the approach of winter, when you must stop watering. Those in the ground may be taken up and put away in boxes like your caladium bulbs; those in pots may be left under the hedge with your other lilies. Water them as soon as they begin to sprout in the hot weather, and when the flower spathes form, mulch (stir open) the surface of the soil and give a little liquid cow-dung once a week till they have finished flowering. The small bulbs you may plant three in a 10-inch pot; those as large as a good-sized onion ought to be placed singly in 12-inch pots.

Alliums are tuberous plants you will be very pleased with; they are easy to cultivate and increase largely from year to year. The white kinds which are valuable for garniture are *Allium neapolitanum* and *Allium ciliatum*. The coloured ones are: *Allium cœruleum* (blue), *Allium flavum* (yellow), and *Allium descendens* (red). You must treat them in the same way as your *Amaryllis*. (See "Hints.")

### Marguerite

(*Chrysanthemum carinatum*), the French marguerite, the English ox-eye daisy, is an annual well worth cultivating. Sow the seed in October in boxes, and plant out into beds as soon as the seedlings are three or four inches high. Get a packet of mixed seed, as the white, yellow and variegated look better in the mass than each by itself. They like plenty of sun, and as they grow to a height of two feet, should be placed at the back or in the centre of other low-flowering annuals. Masses grown in small beds with mignonette borders look very well. Save the seed from the biggest seed vessels. (See "Hints.")

**Mehndee.** See **Camphire.**

### Mignonette

THE botanist's *Reseda odorata* (the mali's "minnamint"), is just what its name denotes—"little darling," and much obliged ought we to be to Napoleon for introducing into Europe this delicious little flower from Egypt. In the flower bordering I have advised for your lawn, make room for mignonette, and mix with the soil you have prepared for your annuals a little sand and a handful of powdered *old lime*. You are sure to find somewhere or other in your compound bits of broken plaster which you can utilize for this purpose. Sow your seed in October *where it is to remain*. Have some in your smallest pots for bringing into the house, and keep these pots sunk in the earth, else the flower spikes will not be good. Mignonette likes its roots kept warm.

Seed-pods will form in February and March. Collect as much as you can every two or three days, by spreading a handkerchief near the plants, and knocking off the seeds into it by a rather smart fillip of the finger against the stalks. Mignonette should be watered at the root—not from the top. When cut for vases, you will find mignonette will *grow* and its flower-buds expand right to the tip of the sprays if you will change the water every day and snip off the ends of the stems. (See "Scent Sachets.")

### **Mina Lobata.**

A VERY handsome, profusely flowering creeper, introduced from Mexico ; seeds are now obtainable from every public garden. Sow in pots in June, before the rains begin, and water every day, keeping them in the sun. These sown early grow slowly, but the stems become firm and strong. In July sow another lot. As these creepers do not like to be transplanted, the safest plan is to make holes where you wish the *Mina lobata* to grow, and then crack the pots and sink them bodily into the holes. At the end of July or beginning of August, give them plenty of water and full sunlight. The upright flower sprays come in pairs by each leaf, and are shaded from crimson and red, through orange and yellow to white, in a beautiful way. It keeps in bloom right into the hot-weather, and seeds profusely. Save seed for the following year. The blossoms of the *Mina lobata* have a virtue possessed by few other creepers : after being gathered, they keep fresh for several days if placed in fresh water every day.

*Mina lobata* climbs well on lattice-work, on pillars, on dead trees, and spreads over rock-work. (See "Hints.")

### **Nasturtium (Tropæolum)**

ALWAYS makes a good show, so you must not omit this from your list of annuals. There are two main types of horticultural varieties, namely, the Tom Thumb (or Dwarf) and the Tall (climbing). Both types can now be had in a great number of colours. One or two varieties are spotted or marbled and very striking. The seeds should be sown at the end of October where they are to remain, but another season can be had in places under 40 inches rainfall, with a moderate temperature, by planting at the break of the rains. Plant the red and scarlet in your borders ; two seeds together (in case one does not germinate and so cause a gap) at distances of six and seven inches. Snip off some of the leaves where they are very thick : the blossoms will be the better for it. The climbing sorts look well grown around a small or high mound or trained



up the brick pillars described elsewhere. The plants are susceptible to frost. Save the seeds when quite ripe, but dry them before putting away in bottles, because they would otherwise be damp, and not germinate when you sow them the following year. (See "Hints.")

Nasturtium marks the 7th July, and is devoted to St. Felix, Bishop of Nantes, 584 A.D.

### Oleanders

(*Nerium*) have much to recommend them. They are evergreen, are always in flower, want no care after they have taken root, and blossom the year after they are planted. In making a new garden let these be planted at once, for they are a great "standby." They grow in any soil, but a little manure or leaf-mould added to common garden earth improves them. Let me advise your planting them along the outer hedge of your compound, or along your carriage-drive, or as a screen for your stables or outhouses. Get cuttings of both white and pink to be planted alternately. These cuttings should be eighteen inches long and at the beginning of the rains should be planted five or six together, *not singly*, in holes dug at distances of six feet. If you have an eye to indoor decoration, put a clump of the *white* oleander somewhere, so that repeated cutting of its flowers won't affect the show in your garden. Besides the white and pink varieties, there are various shades of red, and all varieties show a tendency to double flowers. Just when the rains begin prune your oleanders into shape, and thin out the branches round the bottom. I think the oleanders all pruned to an even height of seven or eight feet look charming! While the rain falls the cuttings will not need watering; but through their first winter and hot weather, you must water them every second day. When your bunches are two years old, they go on bravely and do not mind if you never give them any water except once or twice in the hot months. In the Bengal and Bombay Presidencies, in the Central and North-West Provinces, they grow luxuriantly with little or no care. In very cold

latitudes they do not succeed. (See Flowers in Southern Stations.) There is no shrub to which I feel so grateful as the oleander for yielding an unceasing supply of flowers. (See "Hints.") It can also be pruned so as to grow like a standard rose bush.

### Oxalis

WOOD SORREL, is a bright, showy annual grown from bulbs. In September or October, get from your nearest public garden one dozen bulbs of each colour. There are many—red, pink, purple, white and yellow. Use 6-inch pots with good garden soil such as recommended for annuals, put three bulbs in each pot, and keep in shade till the leaves are well formed, then bring the pots into the sunlight. They are most useful for filling up empty spaces between big pots along the front of your verandahs, which you naturally wish to have appear as bright as possible. And these pots are also very nice for filling in your rustic trays which you may have on rustic stands near your porch, and elsewhere in bright sunlight. Oxalis plants are also excellent among rock work.

When they die down after the winter, stop watering, and when the soil is quite dry, turn out the contents of the pots, shake away the soil gently, remove the bulbs, and put them away like your caladium bulbs, taking care to keep the colours separate. If you don't want to use the pots for anything else, you may leave the bulbs as they are, and put away the pots in a safe corner of your verandah till the following September, when you should repeat the above-mentioned process. The canary oxalis (*O. cuprea*) in particular is very attractive, as its lemon colour is different from other yellows of your annuals. Oxalis should be watered at its roots, without the rose to the watering pot.

Oxalis marks the 21st and 22nd of November in the Calendar, and is devoted to the Virgin Mary, and to St. Cecilia, Patroness of Music, 230 A.D.

### Palms

THESE plants, if in good condition, make admirable indoor decorations.

Send to the gardens at Lucknow and Saharunpur for a list of palms, if you live in the North of India, where you can get them from 4 annas to Re. 1 each.

If you live in the South of India, you could not do better than send to the Royal Botanic gardens, Ceylon, for what you want, for there you will get an assortment of twelve different kinds, packed in bamboo pots, for a moderate price.

*Livistona mauritiana*, the large fan-shaped palm, is what you generally see used by most people. It is a very satisfactory palm to be undertaken by beginners. Then there are some others I would recommend as very pretty and effective and easy to grow,—*Calamus Roxburghii*, *Caryota urens*, *Kentia Forsteriana*, *Phoenix acaulis*, *Thrinax argentea*, etc.

We will suppose you will start with small-sized palms. Put them into 10-inch pots first and give them this soil—two parts leaf-mould, one part common garden earth, and one part composed half and half of pounded *kunkur* and river silt. If there is no river near you, the mud from the bottom of a dried-up pond will do instead of the silt. *Take care there is no manure mixed in with your leaf-mould.* Keep your palms in the shade, and give them plenty of water when first planted. In the rains is the best time to plant them. To keep your palms beautifully fresh and green you must remember two things: give them light but *no sunshine directly on them*, and to keep their leaves free from dust by frequent sponging with clean water. If you have no time to sponge each leaf yourself, the best plan is to douche them in your reservoir. Have a piece of board cut round, of a diameter an inch or two larger than the top of your biggest palm pot; cut a hole in the middle of this board big enough to admit the *trunk* of your palm, cut this board right across into two pieces, then fit it on to the top of your palm pot and tie it down securely.

Your mali can then turn the pot topsy-turvy, and douche the palm in your reservoir quite safely. This is the easiest and most effectual way of clearing off the dust from the the pores of your palm leaves, and, as I said before, to free them from dust is to keep them healthy. This should be done once a week in the hot weather; in the winter once in two or three weeks, *but always in the morning in winter.*

Never keep your palms shut up in your drawing-room *at night*; they can't live without air; so, before shutting up the house, have your palms put right out into the open air in the hot weather and rains; and under a tree in the shelter of the conservatory, or in your verandah, in winter. Palms kept indoors constantly will have a tendency to look *flat*, with their leaves curving downwards. If this happens to yours, you must remove them to hospital, *i.e.*, your open-air conservatory. They are pining for *overhead light*, which the ceiling of your rooms shuts out from them completely, therefore you must keep them in hospital till the light from above in your conservatory draws up and restores the leaves to a more upright and natural position. Always cut away sharply with a knife at once any broken, old or disfigured leaf.

The palms you first plant in 10-inch pots should the following year be put into 12-inch pots, and the next year promote them to 14-inch pots. *Always transplant in the rains.* The sizes I have given are the best-sized pots for rustic stands and for easy moving in and out of rooms. In the 14-inch pot they will grow to a good size, and have ten or twelve well-developed leaves from twenty-four to thirty inches long. In tubs and in the ground they will grow much larger. Palms are always valuable, and therefore should always be taken care of; but it is no uncommon sight to see a palm in its pot out in the blazing sun with yellow dying leaves.

### Pansies

FROM the French *Pensée* (*Viola tricolor*).

“And there are pansies, that's for thoughts.”—SHAKESPEARE.

Sow the seed in your boxes in October (see "Seed Sowing") in ridges well apart, for since they do not all germinate at once, you should have plenty of room to take up those which have five or six leaves, without injuring others which are still undeveloped. The soil for pansies ought to be rich and light, so to the soil already advised for annuals add just a little more old cow-dung and sand. Take up your pansies as soon as they show four or five leaves, and plant four in each seed-box, and keep them in the shade till they are double the size; then plant out in your beds and keep a good many to plant singly in 6-inch pots, for placing which you will have many opportunities. For porchsteps, verandahs, etc., your little pots with single pansies will make a delightful show of colour. These pots should be put in the open air at night, and frequently changed. If you wish to keep your pansies in flower for a long time, you should snip off the withered blossoms before the seed-pods form. They belong to the violet family, and throw out suckers at the roots, so if among your plants you find some particular kind you would like to have more of, take up the plant and divide it at the root, planting them at once.

When you see the leaves of your pansy plants turning yellow, it is because they have too much manure, or the drainage is clogged. Take up your plant and remedy the defect. Those pots from which you wish to save seed should be set aside when the flowers begin to wither, each colour by itself, and tiny squares of *fine* muslin tied over the seed-bearing stems.

The pansy marks the 13th of March, and is devoted to St. Euphrasia, 410 A.D. (See "Hints.")

### **Petunia**

Is one of the most necessary of pretty and easily cultivated annuals. Get one packet of white and one of mixed colours, and sow in boxes at the break of the rains in districts with under 40 inches rainfall and a moderate temperature, and in October in other places. When grown to two or three inches high, plant them out in your

beds and borders. Petunias grow to a height of about eighteen inches, and look effective in many settings. They are specially effective in beds among grass or in mixed borders. The white ones seem to keep longer in flower than the coloured, and you will find if you grow them in alternate lines with your sweet-peas, or to border centres of sweet-peas, the combined perfume will be delicious, and the effect of colour very pleasing.

If you plant your petunias in beds and borders when you wish them to grow closely and compactly, pin down the long sprays with bits of wire bent like big hair-pins. If grown as single plants, pinch off the ends of the branches till the plant attains a bushy appearance. There are now many colours available and double varieties. A glance at a modern seedsman's catalogue will show you the range of device.

Petunias are very hardy, and flower all through the cold and hot weather. They die down in the rains, but come up of themselves the following winter. The flowers of the self-sown seed plants do very well the first year, but after that they are poor and get mixed in colour, so it is better to get fresh seed. (See "Hints.")

### **Phlox Drummondii**

"THE indispensable ornament of an Indian garden," is what Firminger rightly calls this dear little annual. It grows in various heights up to a foot, but is, on the whole, a low grower, so must be put in front of annuals that grow higher. Get some packets of mixed seed. Sow in June or October (as for petunia) in separate boxes. When the plants are two or three inches high, take them up and plant the mixed colours in beds and borders, and the red and pink in patches by themselves (for cuttings) and in flat boxes of your rustic stands; also in small pots for your verandahs and porch,—a good many, so as to admit of their being changed from time to time. Phlox, like petunia, will sow itself, but you must save seed the first year, because the flowers of those that come up self-sown are not so good.

Among your mixed kinds you may see some you particularly like; you can make cuttings from these, or take up the entire plant carefully and divide the roots.

Ask Sutton to send you seeds of the perennial phlox, and plant these in small clumps in corners of your shrubberies, where they will be sheltered from the hot wind. These will grow as tall as your larkspurs, and will keep in bloom longer than the dwarf phlox.

In one of my gardens I had an oblong plot at the back of the house, which I grassed over and planted with a small rosary, each rose-bush at a distance of six feet from the other. This grass-plot rosary had a 9-inch border of red alternanthera, against the inner side of which was a 9-inch border of mixed phlox. This plot, from January to May, was a sight pleasant indeed to the eye. It was watered by the hand, and the grass-cutters kept the grass clipped low. (See "Hints.")

#### **Pilea Muscosa**

Is a pretty weed often mistaken for a fern. You will get plants of this at the public gardens at about six annas each. If you start with two plants in your damp, shady rockeries, you will have quantities the following year. It creeps and roots itself very satisfactorily, and you will find new plants growing on the stones where it had shed its seeds. It is one of the prettiest evergreens you can have in your rockeries; it is easily propagated by layers, and most useful in table decoration. (See "Hints.")

#### **Pinks**

(*Dianthus sinensis*) are the old-fashioned "gilliflowers" of Chaucer, Spenser and other old poets. Shakespeare makes Perdita say—

"The fairest flowers of the season are our carnations and streaked gilliflowers."

Pinks, having flowers and foliage differing completely from other annuals, form a pretty variety. Sow in boxes in October and plant them out when they are about

three inches high into beds and borders. Single plants at equal distances in among your mignonette look very pretty. Keep a good many to plant singly, or three in a pot for porch and verandah decoration. The pinks in pots, if kept where they can be sheltered from severe sun and heat, will flower on into the rains; the other flowers of this family—carnations, etc.—you must not attempt till you are a more experienced gardener. Pinks will keep in flower a long time, especially if you cut away the old flowers before the seed-pods form. Set aside some for saving seed.

The pink means *pure love*. It marks the 4th of June, and is devoted to St. Quirinus, Bishop, 304 A.D.

### Plumbago

Is a pale blue flower growing in extremely elegant bunches and well worth cultivating. It grows quite easily from cuttings and division of roots in any part of India where the winter is not severe. Have several small beds with half-a-dozen shrubs of this lovely blue flower, and sow seeds of the scarlet poppy between. Keep the shrubs only about two feet high by pruning in June and October. (See "Hints.")

### Poppies

"THE ancients who regarded *Sleep* as the healer of all woes, the great comforter of the world, gave him for his only ornament a wreath of poppies."

When sending for seeds, ask for seeds of both *Papaver rhœas* and *Papaver orientale*. The recently developed Shirley poppies are exceedingly beautiful. Get also a packet of mixed *Eschscholtzia*, the Californian poppy, of all sorts of brilliant colours. As you cannot transplant poppies, sow the seeds where they are to remain. In the "Cornflower" paragraph, you will see how I advise sowing them in alternate lines and in beds, and see also paragraph "Gypsophila," whose fine white blossoms show up the



colours of the poppies most beautifully. Have a spare patch in your reserve garden for cutting. Fortunately, the poppy does not deteriorate, so save your seed every year. The seeds of poppies are very small, and the Indians use them as the smallest measures of weight just as the English use barleycorns and call them "grains." (See "Hints.")

It means *consolation*, marks the 15th, 17th and 24th of May, the 18th and 20th of June, and is devoted to five saints in the Calendar, among whom is St. Paschal, 1592 A.D.

### Portulaca

ONE of the most varied and brilliant of low-growing annuals. Sow in October where it is to remain. You must find room for small patches of it between the roses in your rosaries, and at intervals in grass borders, etc. The reason why I don't recommend their having conspicuous beds to themselves, is that their brilliant blossoms are at their best only while the sun is shining on them. When the sun goes round to the west, the Portulacas close so that their beauty is not visible to those who come into the garden only in the cool of the evening. But in winter there are many days when one can bear the mid-day sun with comfort, and you will then find what a "thing of beauty" the Portulaca is, though it may not be a "joy for ever." In tubs and large *nands* where I had foliage plants, etc., growing in the sun, I scattered some Portulaca seed. They flowered beautifully, and formed such a pretty *setting* to the centre plant. Bees are very fond of the flowers of this plant. Save the seed by gathering before the pods are *quite dry*, else they will burst and be lost. Dry the tiny pods in muslin bags before you put them away in bottles.

### Quisqualis Indica

COMMONLY known as the Rangoon creeper, is a really beautiful evergreen. You may already possess it, if not,

some of your neighbours will gladly spare you a root or two. *It needs no care*, a grand virtue in a plant that will afford you flowers all the year round ; it can be grown in many ways. I had a big one in a corner of my lawn among foliage shrubs, which was kept round, compact and shrubby by always having the old wood pruned away. Then I allowed *quisqualis* to climb up some camphire (*mehndee*) along my reserve plot, and it formed a thick, shady, permanent *overhanging* hedge, behind which my reserved violet plants, on a bank, grew safely in the rains, and in the shade of which I kept newly-potted plants. On the sunny side of your conservatory plant *quisqualis* here and there to supplement your *ipomea*, because the broad leaves make a strong shield against the cold blasts of winter and the hot winds of summer. Nail up *quisqualis* with large nails and wire stretched from one nail to the other against outhouse walls, or along boundary walls, and you will be more than recompensed by the result. You will notice that the exposed part of the unopen petals is red, and the rest white : after the flower opens the whole of each petal turns red gradually. *Quisqualis* throws out suckers in all directions : take these up in the rains, and plant in gaps in hedges ; it is most valuable in table and in-door decoration. (See "Hints.")

### Roses

Grow wonderfully well in the Central Provinces and the North-West Provinces, and, after all, do not need very much care. But even if the rose were a difficult flower to cultivate, its rare and perfect beauty would be worth the greatest trouble, and no garden can be complete without the "Queen of flowers." Anacreon, the poet of love, says :—

"Resplendent Rose ! the flower of flowers,  
Whose breath perfumes Olympus' bowers ;  
Whose virgin blush of chastened dye,  
Enchants so much our mortal eye."

The number of books dealing with the rose appears to be endless, and the diversity of instructions is sometimes

bewildering to the amateur. Learned talk of Hybrid Perpetuals and Wichuraianas makes the beginner feel that here are mysteries which he can never hope to fathom. But, after all, the growing of roses is not so desperately difficult a thing as all that. There are, as we well know, rosé trees of no mean quality that grow on the drainage from a tank, the sullage water of a cookhouse, or the casual potfuls bestowed by a careless mali. These incorrigible plants flower in their season and refuse to die.

If such be the case, there must be some possibility of our growing roses to which we are prepared to give a little care. It is not all a matter of technique. It is largely a matter of love. If you will read Dean Hole's delightful work "A Book About Roses" (The Nelson Library of Notable Books), you will get an inkling of what I mean.

A little knowledge may be a dangerous thing, but a little knowledge is better than none, and the first knowledge we want in this land of enormous distances and great variety of surroundings is a knowledge of the climate in which we propose to grow these roses. It is exceedingly difficult for any one person to speak with authority regarding conditions outside those of his or her immediate environment, but the following are general principles.

Roses are at their best in the North of India where they get a cold winter, a dry summer, and plenty of sun. In the Deccan good roses can be grown although there is no cold season of the severity of the North, and a long blooming season can be expected. On the west coast of India certain varieties of roses do well and others do not, the damp air and even temperature seeming not to suit them. Patwardhan in his "A Guide to Rose Culture," p. 22, quoting D'Cruz, states that the following varieties do well in Bombay (the city):—Paul Neron, La France, Marie Baumen, Marie Von Houtte, White Mamon Cochet, Pink Mamon Cochet, Kaiserin-Victoria Augusta, Mme. Margottin, Killarney, Perle de Lyon, Etie Morel, Coquette de Blanchés, Beauty of Waltham, Her Majesty, Lord Roberts, Lady Roberts, Frau Karl Druscki, Étoile de Lyon, Jules Margottin, Francis Kruger, Perle de Jardine,

Mme. Falcot, Sunset, Gen. Jacquiminot, Bride, Archduke Charles, Xavier Oliba, Empress Charlotte, Mme. Isaac Pereira, Viscountess Marguerite, Grand Mogul.

The time for performing the different operations of rose-growing varies to some extent with the climate and location of the garden. The planting of cuttings in the ground may, in places of small rainfall and medium temperature, *e.g.*, Poona, be done at the break of the rains, provided that arrangements are made whereby heavy showers do not cause waterlogging of the beds or pots. In most places on the plains, however, cuttings are best put down in October. In the Konkan the best time appears to be January. The same times hold good for transplanting or budding.

As regards pruning, there is a considerable difference. In the Deccan it is possible to get a new crop of flowers every three months from July to March, and pruning is done immediately after each crop is over. Similar pruning can be applied wherever the climate is such as to cause continuous growth and blooming. In regions of heavier rainfall, where flowering during the rains is not so profuse, a pruning after the cold weather sets in, and one more possibly before the next rains is about right. On the hills early spring is the time. Get the advice of local practitioners wherever you are. Remember that these are general hints.

Do your pruning yourself if at all possible. You will make a better job of it than any mali.

Get some one to show you how to bud, and try your hand at it. The operation is fully described in Firminger's "Manual of Gardening for India," but it is better to have some practical gardener show you how to do it. You will find it a fascinating pursuit.

Remember that rose trees must have

- (1) Rich well-dug, well-drained, well-manured soil.
- (2) Careful watering and weeding. Top-dressing and liquid manure later.

(3) A rest at least once a year. In places where there is frost a winter rest occurs. In hotter climates an artificial rest must be given by the reduction of water. Water reduction should be practised at the end of each flowering season, and a short rest given, but one long rest is really necessary, say the months of April and May, when the plants are kept alive in a hot climate but not allowed to grow vigorously.

(4) Judicious pruning. This has been made into a mystery by some professionals. There is no mystery in it. Cut back strong growers hard, cut back weak growers slightly. Prune for shape, and usually above an outward pointing bud.

The Appendix on Roses in this book by an expert will help you.

There are five or six hundred kinds of roses to be seen in the different public gardens, so it is not an easy matter to choose which you will have, especially as there are some roses known to different persons by different names. However, as you are a beginner, twenty-four different roses will be enough for you to start with, if you have only the small garden mentioned before; but if you have the larger one. I have also described, you might send for three or four of *each* of the kinds I recommend.

#### PINK ROSES.

- |                              |                                 |
|------------------------------|---------------------------------|
| 1. <i>La France.</i>         | 5. <i>Souvenir de Malmaison</i> |
| 2. <i>Captain Christy.</i>   | <i>Rouge.</i>                   |
| 3. <i>Beauty of Waltham.</i> | 6. <i>Victor Verdier.</i>       |
| 4. <i>Souvenir d'un Ami.</i> | 7. <i>Edward's Rose.</i>        |

#### RED ROSES.

- |                          |                                |
|--------------------------|--------------------------------|
| 1. <i>Monte Cristo.</i>  | 4. <i>Firebrand.</i>           |
| 2. <i>Black Prince.</i>  | 5. <i>General Jacqueminot.</i> |
| 3. <i>Alfred Colomb.</i> | 6. <i>Horace Vernet.</i>       |

## . WHITE ROSES.

- |                      |                                  |
|----------------------|----------------------------------|
| 1. <i>Acidate.</i>   | 4. <i>Coquette des Blanches.</i> |
| 2. <i>Amabilis.</i>  | 5. <i>Devoniensis.</i>           |
| 3. <i>Citrodora.</i> | 6. <i>Madame Noman.</i>          |

## YELLOW ROSES.

- |                            |                             |
|----------------------------|-----------------------------|
| 1. <i>Augusta Vacher.</i>  | 4. <i>Maréchal Niel.</i>    |
| 2. <i>Elise Sauvage.</i>   | 5. <i>Marie Van Houtte.</i> |
| 3. <i>Gloire de Dijon.</i> | 6. <i>Solfaterre.</i>       |

Of all which I have mentioned you can obtain well-rooted plants from the Lucknow and Saharunpur gardens. If you are at any distance from the gardens, I won't advise getting cuttings, as you can't depend on their travelling safely. But if you are only an hour or two by railway journey distant from the gardens, you may venture on cuttings. (See "Rose Cuttings.")

But whether you send for rooted plants or cuttings, do not begin earlier than 10th October or later than the end of November—the earlier date for the Central Provinces; the later date for the North-Western Provinces. I say this, as I find the heat begins sooner in the Central Provinces than in the North-Western Provinces: so you must give your new plants as much of the cold weather as possible to establish themselves before the summer begins. So that you should know exactly what you are sending for, I had better give you a short

**Description of roses which I have mentioned.****Pink Roses—**

*La Francé*, beautiful in all respects and a constant delight. She is in fact queen of all pink roses. Deliciously scented, of good shape, large, and very generous. Though she sends out her best blooms in the winter, she gives you some flowers in the rains too. Her monsoon roses are better in the Central Provinces than they are in the North-Western Provinces.

*Captain Cristy* comes next—a fitting pair to *La France*, of exactly the same shade of pink, but differently shaped petals, large and free. He frames his magnificence in rich bronze leaves which cluster close up to his petals, and, like a soldier, *Captain Christy* holds himself erect and firm. He is finer full-blown than in bud.

*Beauty of Waltham* is a fine rose, of rich, satiny pink, slightly deeper in tint than the two foregoing roses. Its glossy petals curve outwards, and it bears flowers plentifully. Does not grow quite as high as *La France* and *Captain Christy*.

*Souvenir d'un Ami* grows to the same height as *Beauty of Waltham*, has glossy green leaves, of bushy habit, flowers plentifully, an elegant fresh pink rose, lovely in half-blown bud.

*Souvenir de Malmaison Rouge*, an old-fashioned climbing rose, whose charm is ever new. A very vigorous rose, needs some support, profuse flowerer, cuttings root very easily.

*Victor Verdier*, a clear, bright, pink rose, quite different in tint and shape from the five other pink roses mentioned. Erect in habit and very showy.

*Edward's Rose*.—It goes without saying that you will have plenty of the hardy, common pink *Edward's Rose*, or *monthly rose*, to perfume the garden, though ladies usually do not care to use it for decorations in the house on account of its pronounced and somewhat crude colour.

### Red Roses —

*Monte Cristo* is a large dark-red rose, close-petalled, of exquisite perfume, hardy growth, and with handsome foliage.

*Black Prince*, as its name denotes, is the darkest of red roses. Give it all the sun you can, and an old nail or two buried near its root. Iron is supposed to enhance its colour. When cutting the blooms of this rose, do so in the morning when the bud is half-open, and it will retain a

pretty shape to the end. When full-blown on its own bush, its petals curve downwards and then it is not so dark as when half-blown.

*Alfred Colomb* is a well-shaped, bright red rose, beautiful in all its stages—from the small bud to the full-blown flower.

*Firebrand* is a dark-shaded red rose of good shape, and gets its name from being conspicuously attractive. A strong, erect-growing rose.

*General Jacqueminot* is one of the good, old-fashioned, never-failing roses, with regular petals. The General is gallant enough to give you some blooms even during the rains.

*Horace Vernet* is a model rose, over which any artist might become inspired! To me it is the best of all red roses. Its perfume is delightful, and nothing can eclipse its beauty when in half-blown bud. See that it gets liquid manure weekly when its buds begin to form, and save every cutting carefully.

### White Roses -

*Acidale* is a *tea-rose*, which I have classed among the white ones, as its faint flesh-pink tint is too pale to class it among the pink roses. It is one of the sweetest of *tea-roses*, flowering profusely all through the rains and winter, and lends itself to all sorts of arrangement in bouquets, etc. Its profuse sprays of buds and new leaves form a pretty decoration in themselves.

*Amabilis* is another *tea-rose*, similar to the preceding in habit, but thicker petalled, and, perhaps, of a slightly deeper flesh tint. I might coin a word in favour of this rose, and call it a *resourceful* rose! Its buds are borne plentifully on longish stems, and may be freely cut to arrange as garniture with other roses whose buds are too precious or too few to be gathered at an early stage.

*Citrodora*, a pure white climbing rose, you will be delighted with. It is strong, grows quickly, and bears a



profuse quantity of flowers in never-ending bunches. Give it support, and prune it sparingly in October.

*Coquette des Blanches* is a very satisfactory milky-white rose, full and cupped in form, given to hang its head rather coquettishly, very hardy and useful; it seems to be continually in bloom.

*Devoniensis*, a sweet old-fashioned rose, whose half-opened buds are considered to be so perfect in tint and form as to make it a favourite model to French artificial flower-makers. Flowers profusely, has very pretty bronzy-green foliage, and grows easily from cuttings.

*Madame Noman*, a perfectly white rose, another model of the artificial flower-makers. It is beautifully shaped, of dwarf habit, has pale-green leaves, flowers liberally, and possesses to a great degree the strong perfume of the real Persian "otto of rose."

### Yellow Roses—

*Augusta Vacher* is a handsome rose, of rich coppery yellow, full and firm, and beautiful from bud to full-blown flower. Get this rose from the Saharunpur gardens.

*Elise Sauvage* is sure to please you. She bears flowers in abundance, tender-petalled, full and cupped, of a pale creamy yellow, darker towards the centre. A rose that looks particularly well in vases mixed with heliotrope only.

*Gloire de Dijon*.—This pale, apricot-tinted rose is a climber of great strength. It grows very easily on support, and loves soap-water! You will find its blooms improve very much if you could manage to grow it where it will get the soap-water running from the bathroom spout. Bears a profusion of flowers. A most satisfactory rose.

*Maréchal Niel*, a grand rose, large and intensely yellow, strong and quick-growing. You must have quantities of this rose, for it is so reliable. I planted three cuttings of *Maréchal Niel* together on a side of the house where it got the soap-water from a bath-room channel. I gave it strong support, and in its third year, in the month of

February, I counted more than four hundred blooms at one time on this bush! Cut away old wood in October.

*Marie Van Houtte*.—Whatever rose you may do without, do not omit this lovely lady from your list. In her you will find a variety of tints possessed by no other rose: her petals of glossy white, canary, and yellow, melt into apricot pink in the most fascinating way. The buds are at first canary, and as they expand, the petals multiply tints of yellow and pink, till, when full-blown, the colour defies descriptions. It blooms plentifully, and cuttings take easily.

*Solfaterre* is another yellow climber, not so luxuriant as *Maréchal Niel*, of a paler yellow, a more expanded flower of very pleasing form, and a very free flowerer. It is a desirable rose, for it grows anywhere and needs very little care. A great many buds form on each spray, quite a bouquet in itself. Should be pruned slightly in October.

I must ask you to cultivate one more rose, *viz.*, *Sweetbriar*, the *Eglantine* of the poets. It is the emblem of "poetry," and in the Floral games, a wreath of it was bestowed on the prize-winner in compositions on the charms of study and eloquence. Its blossoms have no particular virtue, but the leaves of a bush will send its perfume a long way; sprays of it in a vase will perfume a whole room. It is excellent for pot-pourri. It is best propagated by layers.

### Russelia

THERE are two kinds, *juncea* and *floribunda*, both pretty and effective. *R. juncea* is to be found in almost every garden, so if you haven't got it, your neighbours may be able to spare you a root or two. I have seen it growing in huge tangled masses in neglected gardens, where it never got a drop of water except what was rained upon it in the monsoon. At the beginning of a garden walk make, in July, a hollow brick pillar (described elsewhere) on each side of the path, fill it with soil composed half and half of

common earth and leaf-mould, pour water on the soil to make it settle, then place your *R. juncea* on the top, letting its long stems trail over the sides of the pillar. It will root itself wherever the stems come in contact with the ground. Take up these rootlets, and if you have a *pucca* water-course near your well, plant them along it. Give those in the pillars occasional watering in the winter, and as much as you can spare in the hot months. *R. floribunda* may be treated exactly in the same way. It is very pretty for in-door decoration, and keeps in bloom for a long time. Prune slightly after the rains. (See "Hints.")

### Saxifrage

You can bring this down from the hills, or you can buy a pot of it (*Saxifraga sarmentosa*) from any public garden. In rockeries it is invaluable, forming such a pretty velvety covering for border stones. One rooted plant will in one season increase ten-fold; *kunkur* is what it loves to grow upon in the plains, so if it is once established where the rock-work is kept cool, you will find it come out in great force in the rains and continue its silvery green through the winter. It does not like the hot weather, and at that time shrinks back into sheltering crevices. Grow some in flat pots in hanging baskets; but when the hot winds begin to blow, take down these pots and sink them in hollows in your well-shaded rockeries. When planting new roots among the *kunkur* or burnt brick, give it a slight sprinkling of leaf-mould. It propagates itself by suckers, which it throws out in all directions.

Saxifrage marks the 12th of April, and is devoted to St. Zeno, Bishop, 380 A.D.

### Selaginella

Is a beautiful tender foliage plant, between a moss and a fern. You will find many kinds in the hills, if not, they can be bought for a few annas from any public garden. Send for the following kinds: *S. denticulata*, *S. helvetica*, *S. rupestris*, and *S. mutabilis*.

Use soil similar to that recommended for ferns, and plant in small pots. Sink these pots in the crevices of your ferneries; the leaves will spread over the rock-work in the rains, but in the winter you will have to take up the pots and keep them warm in your verandahs.

### **Snapdragon**

THIS is a flower that has long been popular in gardens, and which has recently, in Britain, attained considerable development as a florist's flower. Three main classes are recognised according to size, namely, Tall, Medium (or Intermediate), and Dwarf (or Tom Thumb). The uses of these various sizes will at once suggest themselves; the tall for isolated groups, for the back of borders, and for cut flowers; the medium for the middle of beds, for pots, and for cut flowers; the dwarf for edges of beds and the filling up of spaces in a design. A dazzling array of colours is now available in all classes. A glance at any florist's catalogue will give the information desired about these. In places, on the plains, of small rainfall and moderate temperature these flowers can be sown in June-July, but in most places of the plains it is best to sow in October and transplant when two inches high. On the hills sow in March. Give the big varieties plenty of space. The soil should be rich and well drained. Waterlogging and fresh manure are harmful.

### **Sweet-pea**

THE development and popularity of this plant in Britain have been phenomenal. And no wonder. The delicate shades of colour, the delicious odour, and the lasting qualities of the flowers all combine to make them irresistibly desirable. Florists now offer a large range of tints and forms. In this plant, as in the last mentioned, we also get tall, medium, and dwarf forms. The Spencer type have frilled petals.

The soil for sweet-peas should be well dug and enriched with a plentiful supply of well-rotted manure. This is

necessary, otherwise, although the plants grow, they never attain any size. Plant in March on the hills and October on the plains in open sunny situations. Sow not closer than four inches between plants and nine inches between lines. The seeds should be at least two inches deep in the soil. Sow where they are to grow. The seedlings *can* be transplanted, but the Indian mali is not likely to do it successfully. The plants may need thinning out (every alternate one) if germination is good and growth strong. The plants need support from their earliest days. Put in small twiggy branches at once for the tendrils to seize upon, and as soon as possible give permanent strong support by large twigs or stakes, planted so that they will not fall with a strong wind. As the plants grow, give them liquid manure once a week and keep the soil well hoed and free of weeds. Cut the flowers as they appear and don't let seeds form until you want seed.

#### **Tecoma grandiflora**

Is a fine creeper that will please you very much. It has extremely pretty foliage, and its bunches of handsome, tawny-orange bells are very uncommon. Sow the seeds in March in a sunny place, in the centre of a bed that is now bare of its winter annuals. Make a support for it similar to that advised for honeysuckle. It will shed its leaves in the cold weather, so then remove the supports, cut back the stems to within eighteen inches of the ground, and let tall annuals hide the leafless Tecoma which will be in its glory when the annuals fade. It will send out suckers during the rains: these should be taken up and planted elsewhere. Save the seed.

#### **Tecoma stans**

Is a very pretty shrubby tree, which you may probably have somewhere in your compound. If not, plant seeds of it in your shrubberies in the month of March. It has very pretty foliage, and its bunches of yellow flowers afford you very effective decoration through the hot weather. Save seeds when they begin to dry, and plant in your

outer hedge near the road, or at the back of your outhouses, in March.

This plant is drought-resistant and wind-resistant and has sown itself on some of the rocky hills near Poona where it seems to flourish on the rainfall alone.

### **Thunbergia**

HANDSOME, evergreen creepers, you will find very useful. There are two you may send for: *T. grandiflora*, flowers blue, grown from layers in the rains, develops into the densest of creepers. Should be grown at a distance from the house, as it covers the tallest trees and gives the effect of ivy-covered ruins. *T. laurifolia*, pale mauve flowers, in bloom almost all the year round: not so dense as the former. Should be pruned in the winter. Sow seeds in the rains.

### **Tradescantia discolor or bicolor**

Is an ornamental foliage plant, something like a cactus. You will know it by its long pointed leaves, being green on the upper and purple on the lower surface. It is very common, but I mention it for several reasons: it grows just where you please. Two or three in your rockery make a pretty variety, and it is very useful for in-door decoration.

You may find it somewhere in your garden, if not, some neighbour will probably have more than he knows what to do with, and may spare you a root or two. Plant one or two on the top of brick pillars which mark the entrance to pathways, and let some creeper like *Thunbergia* be trained round it. Have a good big clump of it somewhere in your reserve plot for decorative purposes. Always cut away side shoots, and pick out withered leaves, etc., that may lodge between the broad leaves of the *Tradescantia*. Keep it bright and fresh by watering with the rose of the watering-pot. Propagate by cuttings. *Tradescantia zebrina* is so called on account of its purple and grey-striped leaves. Its culture is that of *T. discolor*.

It is an admirable component of a hanging basket or moist border or rockery. (See "Hints.")

**Tropæolum.** See **Nasturtium.**

### Verbenas

IF you once saw verbenas growing in full vigour, you would understand why I *strongly* recommend them. Ask for seeds of pink, deep red, and white. I don't advise purple and mauve, because these two are inclined to overwhelm the others. Sow seed in boxes any time in October and November. Those sown later, flower longer into the hot weather. Take up the plants when two or three inches high, and plant in some *raised* beds with broken bricks between the roots. Verbenas don't like quite level ground. They are very pretty in raised borders banked with grass, and a pretty effect is also made by having beds in *three tiers*: red verberna on the lowest, pink on the next, and white on the third, pinning down the trails to preserve the even lines of colour.

Verbenas grow thickly and quickly and seed themselves; save seed in the hot weather. They will look scraggy and withered in the rains: cut away the dead branches and put in cutting of *Amaranthus melancholicus ruber*, or coleus. These will make your beds look gay during the rains, and just as these are cut and transplanted (see "Coleus"); in the cold months you will find your new verbenas coming up plentifully. Take them up and freshen the soil (soil for annuals) and re-plant. Have some in your reserve plot for in-door use. (See "Hints.")

### Violets

ARE emblems of *modesty*—

"It has a scent as though Love for its dower  
Had on it all his odorous arrows tossed;  
For, though the Rose has more perfuming power,  
The Violet (haply 'cause 'tis almost lost,  
And takes us so much trouble to discover)  
Stands first with most, but always with a lover."

—BARRY CORNWALL.

Get roots of this dear little plant in October. I would not advise your raising it from seed. A few dozens to begin with will cost very little, and the following year you will find they have more than trebled in number. To your soil for annuals, add a little sand, for violets hate heavy, cloggy soil. For pots, the flat saucer-like pots (*pir-ritch*) are the best. Put a layer of broken bricks at the bottom, fill up with soil to within an inch of the brim, water to make the soil settle, then plant three in a pot, and sprinkle the surface with half-an-inch of soil. These pots ought, if possible, to be kept on the *north* side of the house where they will get the night dews, plenty of light and only a little, say an hour, of actual sunshine. The blossoms of plants, kept in this position, will be plentiful and of a good large size. *I don't manure my violets*, for in my humble opinion, it promotes too much leaf and expedites decay in the rains. In the monsoon, bring your violet pots into the verandah, give them air, light and all the sun-warmth to be had. You will lose a good many; never mind, don't touch them now, but, at the beginning of October, turn out your violet pots.

You will find that many of them which are decayed on the surface have still some vitality left below. Shake your roots quite free from the old soil, and separate the many rootlets you will discover to have formed round each original plant. There will be great deal of old, lengthy roots, clip these off with scissors to within three inches of the plant, fill up your pots with fresh soil, and plant three in a pot as before.

You will have three times as many violets as you started with. Prepare a *sloping bank* on the north side of your conservatory, round a shady tree or under the hedge of your work-yard. Do not forget to have the lower half of the bank composed of broken brick to admit of free drainage, especially during the rains. Use the same soil as for the pots, and plant at distances of five inches. Year by year your plants will increase; find new places for them, for you can never have too many of their delicious blossoms. Water every evening in the



winter and hot weather, and only occasionally at a break in the rains.

The violet marks the 17th and 20th of March and the 10th of April, and is dedicated to St. Gertrude, Abbess, 626, St. Wolfram, Archbishop of Sens, 720, and to St. Mechtildes, Abbess, 1400 A. D. (See "Hints.")

### Wheat

WILL be required to mix with your poppies and cornflowers. Give your mali a couple of annas, and tell him to cultivate a small patch for you near his own private vegetable garden. He will know when and how to sow this better than you can instruct him. The green ears of wheat are best with your poppies and cornflowers, but the fully ripe yellow ears you must save for your bouquets of dried grass in which they will be a pretty variety. (See "Hints.")

### Yucca gloriosa

Is a strikingly beautiful object when in full bloom in the rains. If you have none, and your neighbours cannot spare you two or three shoots, you can buy plants of it in the public gardens. Plant in the rains, with moderately rich soil, and where it will get the full blaze of the sun. If your lawn is big enough to admit of clumps of foliage plants at its corners, certainly have *Y. gloriosa* among them, if not, plant them in your shrubberies. If you have a very old bush of it, unearth the whole, separate the offshoots, and plant singly where required, sinking the stem into the soil so that the lower leaves lie flat upon it. At the end of the hot weather cut away two or three rows of the lower leaves, and bank up the bare stem with fresh soil. The severed leaves may be dried and the fibres used for tying-up purposes. Every year the plants should be treated in this way, and the stem cut down after the flowers have ceased. I recommend *Y. gloriosa* not only because it is a magnificent ornament to the garden, but because its lovely blossoms are particularly useful for decorative

purposes. It is not uncommon for *Y. gloriosa* to grow for some years without flowering. (See "Hints.")

### Zephyranthes

ARE small, pretty, pink and white lily-like plants flowering in the hot weather and rains. They can be had at public gardens. Get *Z. candida* (white flowers) and *Z. carinata* (pink flowers). Plant the white along your grass border, your pink in 6-inch pots, three bulbs in each. Do this in April, and water when planted and then you see the bulbs begin to sprout. (Earlier in the Central Provinces and later in the North-Western Provinces.) These pretty things some call "Star of Bethlehem" and "Indian Crocus." The flowers will come out in May, June and July, and then they will go to rest. Take up the bulbs, which you will find have much increased and put them away like your caladium bulbs, to plant the following year. Water should be withheld when the leaves begin to wither. (See "Hints.")

### Zinnias

ARE really showy and satisfactory flowers to be grown during the rains in some of the beds that will then be bare of the winter annuals. Send to Sutton & Sons, Calcutta, for their mixed double Zinnia seeds, with which you will be charmed. Sow some of the seeds in boxes in the shade at the beginning of the rains, and some a little later, about July, because if your weather is not intensely cold after the rains, you will find some of your later Zinnias will continue blooming into the winter. When your seedlings are two or three inches high, plant them out in masses, at distances of nine inches, where they will get plenty of sun. Zinnias have some lovely shades of colour scarcely seen in any other flowers except dahlias. They make the garden gay during the rains, and are very useful as cut flowers. (See "Hints.") Save the seed, dry in muslin bags before putting away in bottles. A self-sown crop may come up in the cold weather, but it is usually poor in size, colour,

and shape of flowers. The plant undoubtedly tends to degenerate if seed is saved here and it is best to procure fresh seed annually if first-class plants are desired.

The Zinnia marks the 14th of August, and is dedicated to St. Eusebius, third century, A. D.

14/8/1914

