

GARDEN GUIDE FOR JANUARY.

KITCHEN GARDEN.—Cucumbers in full growth will want linings, as the frost soon reduces the heat. Sow in pots for succession, and plunge in dung-heat. Sow small breadths of early peas and beans in sheltered spots, or in frames for transplanting. Small sowings may be made of lettuces, cauliflowers, and cabbages in boxes, to be forwarded in gentle heat; and plantations of horseradish may be made. For the latter the ground should be trenched two feet, and fat manure laid at the bottom of the trench; then dibble in the crowns in rows, two feet apart, the sets six inches from each other. Asparagus, seakale, and rhubarb may be forced with very little trouble, by making up a hot-bed in an old frame, taking up the plants and placing them on it, and covering with any light soil; if the heat does not hold till the plants have done their work, warm linings must be used. Asparagus put in for a succession; cover with three inches of mould over a steady sweet-heat.

FLOWER GARDEN.—Bulbs may still be planted, and bloom well, though late; but it is an injury to them to be left so late. Autumn planted bulbs will soon be pushing through, and though moderate frosts will do them no harm, it is as well to mulch the beds to guard their foliage from the effect of the severe frosts which frequently follow heavy rains at this season. The best beds of tulips should be covered during storms, if there is any indication of a frost following, but if the weather continue mild and open, let them have the benefit of gentle showers. Tulips, however, are the hardiest of all bulbs, but hyacinths, gladiolus, ranunculus, anemones, and Cape bulbs generally, need some little protection during severe weather. During dry weather, it is well, at this season, to stir the surface of tulip beds, to give air to the roots, and lay the soil, finely broken, against the stems. After frosts, look over the borders, and where plants have been lifted, press the earth close about them. Have at hand fern, dry litter, or mats, to protect any out-door things of questionable hardiness, but do not keep them swathed up longer than is strictly necessary. Small subjects, such as pansies, may be protected by means of a garden pot, turned over, and with the hole stopped; this should be removed every morning, when the weather is not too severe. Auriculas water only enough to prevent getting dust-dry, and choose mild weather. Cleanse from dead leaves, and in so doing guard against injuring the collar of the plants. Keep the frost out of the frames if possible. Beds of pinks should now be top-dressed with rotten dung. Pansies, carnations, and other herbaceous plants in pots, must have plenty of air and moderate waterings, for they are now beginning to grow—for all such things a north aspect is best during the whole of this month, for the morning sun is often more injurious to them than one or two extra degrees of frost. Prepare ground for plantations of dahlias, hollyhocks, carnations, and chrysanthemums. If trenched, and broken up with dung now, it will be in much better condition at planting time than if made ready at the last moment.

Dahlias to be looked over, and those of which stock is wanted to be got to work. Choice sorts are best got in for roots, and get them at once, if not secured. Carnations must have air as often as possible to prevent mildew. Beware of damp, especially after frost. Pansies to be protected by sticking a few evergreen boughs among them. Plants in pots keep safe from frost.

CONSERVATORY AND GREENHOUSE. — Conservatory to have enough fire to keep away frost and damp. Ventilate whenever weather permits, and drive out damp with fire-heat, but be in no haste to set things growing. Mildew will appear occasionally on the top shoots of geraniums; cut at once to a sound joint. Keep the floor very clean. Training specimen plants is a very interesting task when outdoor work is at a stand-still. Prepare for the busy season by securing compost, pots, crocks, etc. The cultivator must be daily on his guard against severe weather, and rapid growth must not be promoted. Camellias, and other plants coming into bloom, should be kept liberally moist, and should have weak manure-water once a-week; they should be placed in the warmest parts of the house; ericas, epacris, etc., may have cooler places. Bedding plants may now be started for cuttings, where there are good appliances for propagating; but, where resources are limited, it would be better to wait till next month. Cinerarias to be sorted over, and those showing trusses to be encouraged in intermediate house. The strongest of those not showing trusses may have another shift to make fine specimens for late bloom. Use sulphur if any signs of mildew, and secure against frost. Fuchsias of good sorts should now be repotted in peat and fibrous loam, and started for early blooming, and such as it may be desirable to propagate, will soon furnish cuttings for the purpose. Calceolarias, geraniums, and primulas should have a warm position, and moderate supplies of water; those that require it should be cleaned and shifted, and all plants showing trusses should have weekly doses of manure-water, and abundance of light, and as much air as the state of the weather will permit. Watch for green-fly, and fumigate before mischief is done. Keep the house as clean and dry as possible, and admit air on fine days whenever the temperature outside rises above 35 degs., and especially among heaths and hard-wooded plants. Keep succulents quite dry. Temperature 40 degs. to 45 degs. at night, 50 degs. to 55 degs. by day. Pelargoniums for show to be kept gently growing. Avoid wetting the leaves. Keep the plants sufficiently apart for air to circulate, and near the glass. Fumigate frequently.

STOVE.—During this month it is necessary to guard against premature excitement, the solar light being insufficient to sustain a healthy, rapid growth; hence, water must be given sparingly, and the breaking of the plants retarded as much as possible till next month, by the maintenance of a very moderate temperature; on the other hand, stove plants that are now coming into bloom, or such things as are forced in the stove for greenhouse and conservatory embellishment, should have every encouragement. Forced roses should be looked over, and the buds examined for the detection of grubs, and the drainage of large pots should be looked to, to see

that no stoppage occurs. Plants intended for specimens must be repotted as they require it. Orchids and ferns may be repotted and separated where desirable; Poinsettia pulcherrima, and Euphorbia jacquiniiflora may be taken to the greenhouse if the temperature there ranges about 50 degs., and a few achimenes and gloxinias may be put in heat for early blooming. Cucumbers and melons for early use should be got in at once. Average temperature of the stove this month, 60 degs. A temperature of 50 degs. night, and 60 degs. day, will bring on roses, daphnes, lilacs, weigelias, kalmias, azaleas, double plum, almond, and peach, and other of the showy spring flowers, with very little trouble. Keep a moist air, and beware of crowding.

NEW BOOKS.



MOST important among recent horticultural books is a handsome volume entitled *The Clematis as a Garden Flower*. By THOMAS MOORE, F.L.S., and GEORGE JACKMAN, of the Woking Nurseries (Murray). In the FLORAL WORLD for May, 1871, we presented a coloured figure of one of the new hybrid clematis, and gave some account of them and their decorative uses and cultivation. The new and attractive work by Messrs. Moore and Jackman will be found intensely entertaining and permanently useful to those of our readers who have made themselves acquainted with the merits of these flowers, and we may as well add that those who have hitherto neglected them may insure for themselves a new and expansive pleasure by securing the treatise, and making it subservient to an hour of intellectual pastime, while the nights are long, and the fire-side the safest haven. In a substantial octavo, the authors have presented a full account of the clematis family, and of the rise and progress of cross-breeding, which has resulted in the production of a superb group of garden flowers, which have the threefold merit of perfect hardiness, long continuance of display, and the production of floral colourings much needed to complete the chromatic harmony of garden scenes. In red and yellow shades we are rich; in blues and purples, poor; that is to say, we were poor; but the clematis has made us rich in this department also, and not a few of the new varieties are entitled to be regarded as the most gorgeously coloured of any of the many subjects available for outdoor display in the summer season. Moreover, these are not only bedding plants in the properest sense of the word, that need no protection of glass during the winter, but are remarkable for grandeur when properly grown in pots for the conservatory, or employed to cover walls and trellises with their light twining and fast-growing stems, and huge salver-shaped flowers of purest white, intensest purple, softened crimson, or full cobalt blue. The book before us treats in the amplest manner of the cultivation of the plants, as well as of their botanical relations and garden history, and it is a perfect guide to the selection of varieties for whatever purpose the cultivator may require them.

GARDEN GUIDE FOR FEBRUARY.

KITCHEN GARDEN.—Asparagus and sea-kale must be started at once for supply next month. Take up four-year-old plants of asparagus, and plant in a bed over moderate dung-heat. Let the grass grow till there is a plump green top before cutting. Sow the main crops of peas and beans at the first favourable opportunity; a few of the earliest sorts, on well-drained slopes, facing the south, to come on quick; or, if a small successional supply is required, get in a few rows of the earliest sorts of each, and sow again as soon as the first come up, and so on, to the end of March. Sow spinach between the rows of peas. A little of everything in the edible way may be got in now in good positions—small sowings of cabbage, Brussels sprouts, carrots, turnips, parsley, radishes and lettuce, but the main sowings of most things should be deferred. Get one pan of celery forward in heat, and some lettuces for planting out. Where ground in good heart was ridged up over winter for potatoes, the whole may be planted now. Trench them in, in preference to using the dibber; but if the weather should be wet, or the ground frozen, get in a few early sorts only, and also some early kidneys in frames for the first supply. Prepare, by trenching and manuring, the plots intended for seakale and asparagus next month. Turn out potted cauliflower-plants on well-manured stations, four plants under each hand-light, choosing a very sheltered position. Edgings and plantations of strawberries may now be made, and old beds must be dressed. Prune and tie raspberries, leaving but three or four shortened canes to each stool. Heap half-rotten dung over the old stools of rhubarb, to promote early production. Potatoes may be sprouted by laying the tubers on a flue or on the surface of a pit planted with asparagus. A gentle heat and full light will prepare them for planting in frames for an early crop.

FLOWER GARDEN.—Auriculas should have one good soaking with water soon, and a fair state of weather must be taken advantage of for it. If it continues frosty, keep them nearly dry, but they are in haste to move, and must be encouraged with caution. The old directions for sowing hardy annuals and perennials in February do not altogether suit our seasons of late, and it is seldom advisable to sow any before March, except in frames and hot-beds; but, with artificial heat, sowings of most things may now be made, both for blooming in pots in the greenhouse and conservatory, and for turning out into beds and borders. Do not forget *Phlox Drummondii*, *Delphinium formosum*, cinerarias, Chinese primroses, stocks, asters, auriculas and balsams, for all of which a moderate heat is sufficient. Most perennials, and even chrysanthemums and dahlias, sown now, and hardened off as soon as pricked out, will flower the present season. Top-dress auriculas, polyanthus and pinks, if not done last month, and make up dung-beds for propagating, as the demand for bedding stock is frequently greater than the room devoted to wintering them can supply. Ground roots of dahlias should now be starting for cuttings. The losses have been very numerous in

some places, and there will be a demand for good sorts in April. Leave pot-roots alone till the end of the month, unless they are sorts that are much required for stock. Soft-wooded and free-growing plants may be multiplied rapidly with the help of a frame. Fill up to within twelve inches of the glass with dung that has been previously turned, to remove its rankness, and upon it spread four inches of dry sandy soil, and put in the cuttings as fast as the plants supply them. Look over the stock of seeds, and determine what will be required for this season's sowing, and, in good time, fix upon the style and method of bedding out you will pursue, so as to raise stock for the purpose, for the season of propagating is now at hand, and for the next two or three months, the chief work of the whole ensuing season will have to be got through.

CONSERVATORY AND GREENHOUSE.—Azaleas must be kept back, unless there is a large stock, or they will be all in bloom at once, instead of giving a charming succession. Those already in the forcing-house must have plenty of water, and if well loaded with bloom, they should have weak guano water. The stock here will now be starting into spring growth, and though air must be given as much as possible, cold draughts and frosts must be guarded against, as, during this month, most greenhouse plants are more susceptible of cold than at any other period of the year. Shift such things as require it; see to the drainage of plants well established; give water pretty freely to such as are making free growth; azaleas and camellias must have plenty. Camellias are now pushing fast, and must be bloomed in a dry air, and be shaded from mid-day sun. Weak guano-water will help them, but give two waterings with plain water to every one of manure. Camellias done blooming, should be put into a temperature averaging sixty-five degs., with a moist atmosphere and partial shade, by means of tiffany, or canvas, over the glass, to promote the growth of new wood. Epacrises, correas, leschenaultias, polygalas, etc., should have a little extra warmth, and be brought into free growth for flowering; the latter like a little old mortar mixed with the peat in potting them. Houses devoted to collections of plants should now be carefully looked over, as some things may be doing badly, owing to too low a temperature, while others may require it to be reduced. A free increase of fire-heat for a few hours at mid-day, sinking to the old point at night, is sometimes advisable, to keep mixed collections healthy; and in the arrangement of the stock, orchids and New Holland plants, and exotic bulbs, should be placed at the warmest end; pelargoniums, calceolarias, and cinerarias, intermediate; and ericas at the coolest end, with a free circulation of air. Put *Deutzia scabra*, *Weigelia rosea*, and *Forsythia viridissima*, into moderate heat to bloom well, and they will make a beautiful display for some time to come. Look out sharp for green fly and red spider, and fumigate with sulphur and tobacco as may be necessary. Fuchsias that have started should be laid on their sides and syringed occasionally. Plants coming into bloom must have weak liquid manure once a week. Bedding fuchsias start in heat; and get ready a compost of turfy loam, one-half; old hot-bed dung, one-fourth; leaf-mould, one-fourth; and at the

first potting of newly-struck cuttings, plenty of silver-sand. Geraniums have been cut up very much by the damp in places where the bedding-stuff is wintered in pits. When killed down to the pot, the roots will generally be found alive, and if the fleshy parts of the roots are cut into two-inch lengths, and dibbled into silver-sand with the top of each cutting above the sand, good plants may be obtained, but they will bloom late. Hyacinths must have frequent doses of liquid manure, and there is nothing better than diluted house-sewage or soot-water. They like bottom-heat, and must have plenty of light to give them their true colours, but to be shaded when in bloom. Pelargoniums must be got into shape at once, and with as few sticks as possible. When they want water, give them enough, but let them be rather dry for a while, rather than water during severe weather, because with water they will also require air. Average temperature this month—forty-five degs. at night, fifty to fifty-five degs. by day, with a rise of five degs. more with sun-heat.

STOVE.—Pines should be kept at a moderate bottom-heat, or many may fruit prematurely; from eighty-five to ninety degs. will be quite sufficient; anything beyond ninety is a positive injury to them. In houses where vines are in leaf, air must be given at every opportunity, but with great caution. Beware of undue heat at night; it is better to let the temperature sink a few degrees on sharp nights than to drive the vines on in an unhealthy air, which is a frequent cause of failure in setting and ripening. Keep evaporating pans at work where syringing would be inadvisable to keep down spider.

FORCING PIT.—In this structure keep the thermometer at eighty degs. for bottom-heat, and on sunny days increase the atmospheric heat to the same point for an hour or two, to give an opportunity for syringing.

THE LEAFING OF THE OAK AND THE ASH.—The old proverb which deduces an augury of the weather from the relative position in order of time of these trees in leafing has been brought into prominence again. The Rev. F. O. Morris, writing on the weather of last year, makes the following remarks:—"This is the last day of the year 1872, and the excessive rainfall we have had for the greater part of the period has certainly been a proof of the truth of the old adage:—

'The oak before the ash, a summer of splash;
The ash before the oak, a summer of smoke.'

I believe, however, that the old saw is sometimes read backwards, and I do not myself place much faith in it. I incline to think that the fact of one tree or the other being out in leaf first is a sign of the weather that has been rather than that which is to be. But be that as it may, the oak, as I duly noted at the time, was in full leaf this spring long before the ash, and far more so than it usually is even when it has the start in the race between the two. Not only so, but when the ash-trees had begun '*sero sed serio*,' a full month after the oaks, to come into leaf, they were cut off by the extraordinarily severe frost of May 19 and 20, and did not for months come into their proper full foliage, if ever they did so at all this year. The walnut-trees, too, as well as others, were withered away in like manner, and had only come into leaf again by the end of June."

GARDEN GUIDE FOR MARCH.

KITCHEN GARDEN.—Asparagus to be cut without forcing should be liberally top-dressed, and Globe artichokes be planted from strong suckers. Choose those that have plenty of roots, and remove the hard portions from the base, and trim away the lower leaves. The main crops may be sown, at the first opportunity, of all the leading vegetables, except beets, but it is advisable for all small holders to make successional sowings of small patches rather than large ones, of any kind of vegetable. Good breadths of peas and beans may be got in, with spinach between the rows of peas. Sowings of marrow and other main crop peas should be made for succession. Brussels sprouts, two or three sorts of Borecole, Chou de Milan, Enfield Market, and Atkin's Matchless, a small pinch of horn carrot, cauliflower, leek, and lettuce. Short top radish and small salads should be sown in small patches every fortnight. The first pans of celery may be pricked out towards the middle of the month, on a warm border which has not been dug, but covered with six inches of dung, with a sprinkling of light earth on the top. About the middle of the month sow the main crop of onions; these should have a piece of deeply-dug strong ground, enriched with manure, and the seed should be covered with a sprinkling of fine charred rubbish. Early planted potatoes appearing above ground should be gently earthed over to protect the young tops from the night frosts, and if there is any potato planting yet to do, the sooner it is accomplished the better, for experience has proved again and again that the heaviest and soundest crops are usually obtained by early planting. The best mode of planting is to trench them in with the spade, so that the ground has not to be trodden on, either immediately before or after their insertion; the use of the dibble is very objectionable. Asparagus should be planted towards the end of the month, and the best plantations are made by sowing the seed where it is to remain, and thinning to the required distance. Seakale may also be planted any time this month; the small "thongs" make the best beds.

FLOWER GARDEN.—Sow annuals in small quantities, to be succeeded by further sowings in April and May. Push a few choice sorts, both hardy and tender, forward in a propagating-house for a little early bloom. Sowings may also be made of perennial and annual flower-seeds, and even half hardy kinds, but the latter will of course not appear above ground until the temperature is sufficiently elevated for them. Old borders should be trenched up, and the perennials divided and replanted, and they will bloom much stronger in consequence this summer, besides having more neatness, and enabling the cultivator to adopt new arrangements. Any stock required for the flower garden should be obtained without delay, and especially of such things as Chrysanthemums, Delphiniums, Phloxes, etc. Rockeries, may now be planted with alpine and selected dwarf-growing annuals and perennials, and roses of choice sorts may be grafted on well-rooted stocks, the prunings of good sorts serving

as scions for the purpose. Auriculas are now growing in earnest, and must be protected from biting winds. Water liberally, as weather permits, and liquid manure once a week. Dahlias, keep moving, and strike cuttings as fast as you can get them, of the best sorts. This is the best month for amateurs to begin with them. Plant out such hardy plants as have been kept over winter in preservative pits; pot carnations, and place in a north aspect any that are kept in small pots for potting in April. Ranunculuses and anemones may still be planted, and seed of each may also be sown.

FRUIT GARDEN.—Fruit-trees in need of protection must be provided for at once, or the crop may be lost. Shelter them with netting or tiffany before the blooms expand, as the embryo fruit is frequently killed in the bud. Melons in bearing must have liberal fire-heat and plenty of water. Give full light, and train regularly. You cannot have good fruit without first a liberal surface of foliage. Sow for summer culture. Planting may still be performed, but every day's delay now increases the risk, for it is a positive injury to any deciduous tree.

CONSERVATORY AND GREENHOUSE.—Azaleas done blooming, trim up, and clean with tobacco-water or Gishurst compound if affected with scale. Repot those that have exhausted the soil in the old pots, and set them growing at once in a moist and gentle heat. Bulbs in pots, keep well watered, and shade as soon as the blooms are well coloured. Soot-water once a week will strengthen those throwing up. Cinerarias, Primulas, Genistas, Pelargoniums, and other things coming into flower, must have as much light as possible, and plenty of air on bright days; but cold, dry, frosty winds will do much mischief, unless their force is broken by means of matting, and a judicious management of the whole ventilation. See to the regular stopping of all plants that require it, especially of Pelargoniums; stake out specimen plants; give tepid water liberally to all fast-growing and blooming stock, with, at regular intervals, liquid manure. In the absence of guano or sheep's dung, soot-water is a nourishing stimulant for occasional use. Fuchsias should now be got into free growth, and have frequent syringings; Epacris and Camellias done flowering, should have a gentle heat to promote growth, and a vigilant look-out must be kept against vermin of all kinds, which now come in armies, and commit vast havoc if not checked in time. Keep up the supply of flowers from the abundance the season affords to choose from. Cytisuses are now very gay, and make a beautiful contrast to the colours of primulas, cinerarias, and hyacinths. Allow none to swell pods of seeds, unless seed is wanted, as it weakens the growth of new wood. After flowering, ill-shaped plants may be cut back and refreshed with a top-dressing. In the propagating and cutting frame, a good steady heat must now be kept up, for the increase of all kinds of bedding stock, and the raising of tender annuals, and to start Achimenes, Gesneras, and Gloxinias. Average temperature this month 50 degs. at night, 55 to 60 degs. by day; with a rise of 5 to 7 degs. with sun-heat.

STOVE.—Pines swelling their fruit should have plenty of manure
March.

water; and fresh air must be admitted whenever the temperature rises to 85 degs., but the sudden admission of cold east winds will do much harm. The bottom-heat should not sink below 80 degs., or rise above 90 degs. When the syringe is used it must be rather to dew the plants than drench them; which soddens the soil, and causes an unsalutary check. The fruit swells badly-coloured in cloudy weather, so let them have all the light possible. Shift young stock, and mix half-inch bones with the loam, to keep it rough and open. Vines that have set, must be carefully thinned, not merely with a view to the production of good fruit, but for handsome bunches. Promote moisture in the atmosphere among peaches and vines, but never use the syringe to trees in blossom.



INGER-POST FOR PURCHASERS OF PLANTS, SEEDS, ETC.

CHOICE BEDDING PLANTS GROWN
FOR THEIR FLOWERS.

AGERATUM.—Imperial Dwarf, Mexicanum.
CALCEOLARIAS. — Amplexicaulis, Golden
Prince, Gaines's Yellow Gem, Gibsoni, Prince
of Orange, Yellow Prince of Orange, Sparkler.

BEDDING DAHLIAS. — *Light*: Alba floribunda nana, Princess Mathilde. *Yellow*: Pluton, Golden Bedder, Golden Ball. *Scarlet*:
Beauté de Massifs, Scarlet Tom Thumb, Rising Sun. *Rose
and Lilac*: La Belle, Rose Gem, Blonde. *Crimson and Purple*:
Tom Thumb, Crimson Gem, Royal Purple, Zelinda.

GAZANIA.—Aurantiaca, Le Noir, Splendens.

HELIOTROPIUMS.—Madame Fillion, Etoile de Marseilles, Miss Nightingale, Mrs. Lewington, Jersey Beauty.

LANTANA.—Alba lutea grandiflora, Imperatrice Eugenie, Jean Bart, Madame Bouchardet, Ne Plus Ultra, Madame Røempler, Roi des Rouges.

LOBELIA ERINUS.—Brilliant, Cobalt Blue, Blue King, Distinction, Indigo Blue, Speciosa grandiflora, Trentham Blue, White Perfection, Pumila grandiflora, Pumila model, Pumila Celestial Blue.

PANSIES.—Claribel, Pride of Rufford, Imperial Blue, Ware's Cloth of Gold.

ZONATE PELARGONIUMS. — *Shades of Scarlet*: Crystal Palace Scarlet, Kate Anderson, Vesuvius, Waltham Seedling, Brilliantissima, Thomas Moore, Lucius, Rev. J. Dix, Star of Fire, Omega, Charley Casbon. *Shades of Crimson*: Stella, Crimson Nosegay, Baron Ricasoli, David Garrick, Wellington. *Shades of Rose and Purple*: Lord Palmerston, Purple Nosegay, Countess of Sefton, Duchess of Sutherland, Mrs. Laing, Lady Kirkland, Amy Hogg. *Shades of Pink*: Amy Robsart, Christine, Magenta Christine, Queen of Denmark, Wiltshire Lass. *Shades of Orange*: Indian Yellow, Hibberd's Orange Nosegay, Harkaway, Harry Hieover, Donald Beaton, Triomphe de Stella. *White*: Purity, White Perfection, White-flowered Ivy-leaf, Floribunda alba nana (Groom), Virgo Marie, White Wonder. *Shades of Salmon*: H. W. Longfellow, Gloire de St. Louis, Sensation, Salmon Queen, Excellent, Monsieur Barre.

PETUNIAS.—Alba Floribunda, Countess of Ellesmere, Crimson Bedder, Miss Earl, Queen Improved, Shrubland Rose, Imperial Purple, Spitfire.

PYBETHRUM.—Double White.

SALVIA.—Fulgens, patens, splendens.

TROPEOLUM.—Advancer, Compactum coccineum, Compactum luteum, Yellow Dwarf, Lustrous, the Moor, Luteum Improved, Mrs. Treadwell.

be placed underneath to raise the surface of the old ball of soil high enough to require little or no soil over it. In all cases the soil must be pressed firm, and composts consisting entirely or chiefly of peat will require much more pressing than would be desirable for composts of which loam is the staple. In potting off from cutting pots there will be no difficulty in pressing the soil firm enough with the hands, but in shifting established plants from one pot to another a potting stick will be necessary. This can be readily made, and the most convenient size will be fifteen inches long, an inch and a half wide, and between a quarter and half an inch thick at the top, to admit of its being more readily grasped with the hand; the corners can be shaved off with the knife. With this the soil must be worked regularly round the ball, so that no vacant space may be left between the old ball and the side of the pot. The soil must also be pressed to an equal degree of firmness all round the ball; for if less firm on one side than the other, the water will drain away down that side and the other side will be only partly moistened. In repotting plants growing in peat it is well nigh impossible to ram it too firm, and unless the new soil is made quite hard the water will run through it before the old ball has become properly moistened. It is owing to a neglect of this precaution that so many cultivators fail in growing hard-wooded plants satisfactorily. It is not less important for the old ball of soil to be of a proper degree of moisture for the well-being of the plant before it is transferred to a fresh pot, for when the soil is in a dry state there is a considerable amount of difficulty in moistening it afterwards. In the event of a difficulty in making the soil equally moist, whether in the case of a plant that has been long in the same pot, or one newly potted, make an end of the difficulty, by dropping it gently into a bucket of water, and leaving it there for half an hour, by which time the roots will be well wetted throughout.

S. H.

GARDEN GUIDE FOR APRIL.

KITCHEN GARDEN.—Owing to the wet weather during the winter, the work of the last month has been delayed, and seeds sown early will not be much behind those sown last month. Sow Windsor, Longpod, and Johnson's wonderful beans; Marrow and Prussian Blue peas, and a few rows of the earliest sorts, to come in before the late peas are ready. In small gardens, the dwarf kinds are always to be preferred. Sowings should also be made of Horn carrot, Savoy cabbage, Brussels' sprouts, Scotch kale, broccoli, cauliflowers, and cabbages, for autumn use; a succession of such things being preferable to a glut all at once for the private grower. Among cabbages, Atkin's Matchless, Wheeler's Imperial, Early York, and West Ham are good sorts to sow now, but the main crop of cabbages should be up by this time, and must be hoed between, when the ground is in a fit state. Beet should be sown in the second week, in ground deeply dug, but not manured; the main

crop of celery should be sown on a rich warm border, the surface to be made light and fine; sow thin, and merely dust the seed over. Sow, also, onions, lettuce, radish, small salad, sea-kale, and asparagus; the two last, in drills, one foot apart, and one inch deep, for asparagus, and two inches for sea-kale; another mode of raising sea-kale plants is to sow in four-foot beds, the seed to be in patches of eight inches diameter, and two feet apart, and about eight seeds in each, the plants to be thinned to three plants in each patch; the ground should be rich, well drained and deep. Beds may also be formed now by planting the small roots about the size of a pencil, which should be cut up into nine inch lengths. Those who purpose raising seedling rhubarb plants, should sow about the middle of the month, in shallow drills, eighteen inches apart, dropping the seeds in patches, six inches from each other. All the varieties of the gourd family may be sown in turf or brick pits. Potatoes not yet planted should be got in without delay, and towards the end of the month scarlet runners and French beans may be sown; the runners should have a warm, dry position until the first of May, when they may be sown in almost any soil or situation without risk; but, like most other things, yield the best crops on ground well dug and manured. The main crop of carrots should be sown towards the end of the month, and there is still time for a crop of parsnips, if none have been sown yet, and as a small crop of so useful a vegetable is better than none at all, those who have delayed may still secure one. Slips of kitchen herbs may be put in any time this month, and will root quicker if planted in a rather dry sandy border.

FRUIT GARDEN.—Peaches, apricots, and nectarines should be carefully disbudded, and as soon as bloom is set, give the walls a shower from a garden-engine, to cleanse the trees and dislodge the pests that are ready to make havoc with the young fruit. Grafting may still be performed, but not a day should be lost.

FLOWER GARDEN.—Seeds of hardy annuals and perennials are to be sown early, and towards the end of the month the more tender kinds may be safely committed to the ground; but very small seeds of choice things had better not be sown till next month. Perennials may be planted out and old stools of phlox, chrysanthemum, Sweet William, etc., may be parted. Dahlia roots may also be planted, and if the shoots appear before night-frosts are over, they may be protected by flower-pots inverted over them, and the holes stopped with pieces of tile. Where early beds of dahlias are required this plan may be adopted in the putting out of young plants, and if well hardened first, the beds may be filled about the middle of the month, and inverted pots, litter, or netting, used to protect them during fits of cold wind or frost. Box edgings should be clipped, and ivy may be cut in and trimmed, and fresh plantations made of last year's roots. Cuttings of ivy may also be taken and planted in a sandy border, only partially exposed to the sun. The cuttings should be short-jointed, and trimmed of the lower leaves. Tigridia bulbs may be planted two inches deep. A light netting, or some similar protection will be found useful now as a protection to tulip beds, and

if the foliage becomes frozen, water them with cold water before the sun gets on them. Walks should be turned and rolled, and grass-plots dressed, so as to give an air of neatness and order to the whole of the ground.

GREENHOUSE.—If bedding-stock is still in request, cuttings should be struck in a brisk heat; they will bear much more heat now than they would a month ago. China roses may be propagated in pots by taking off young shoots close to the old wood when four inches long, and plunging in a moderate heat. General collections should only have a moderate heat, and a strong healthy growth should be promoted by giving plenty of air, with a view to putting-out the fires for the season. Many specimen-plants will want liberal shifts, and all subjects not immediately required in flower, should be regularly and frequently stopped to induce bushy growth and form good heads. Water and liquid manure must be more freely given, and vigilant efforts made to keep down the green-fly and thrips. Many of the less tender things may be removed to cold pits, to increase the room for other things that want continued protection to make fine plants. Young stuff from the propagating-house should be potted as fast as rooted, and kept close till started afresh, and then be gradually inured to air and light, so as to be strong by the middle of May. All tropical plants required for summer blooming in the house, should be got on without delay, and a quick growth promoted so as to allow them as long a season as possible for blooming and ripening their buds for next season. Average temperature this month 55 degs. by night, 60 to 65 degs. by day. Where desirable, the house may be shut up with sun-heat to render fire unnecessary.

STOVE.—Vines in bloom must be kept close, and with a little extra fire-heat to prevent injury from damp setting on the berries; melons should be encouraged to make quick growth until established, and then kept cooler to encourage the production of fruitful wood; but do not stop the main shoots till they have extended as far as the space allowed them, and then they may be stopped to promote the growth of laterals. Pines will want air as often as possible, but the atmosphere about them must be kept moist. Red spider will now be getting active, and must be kept down. Keep also a good look-out for green-fly, especially among young stock.

NEW BOOKS.



MR. HEMSLEY, late of the Royal Gardens, Kew, has published a volume which we commend to every one of our readers, as the best of its kind, and a work that was greatly needed. It is entitled "*Handbook of Hardy Trees, Shrubs, and Herbaceous Plants*" (Longmans), and it forms a portly 8vo of nearly 700 pages, handsomely printed, and profusely illustrated with excellent wood engravings. Mr. Hemsley's object has been to convey to the reader every item of information about every hardy plant worth notice, consistent

GARDEN GUIDE FOR MAY.

KITCHEN GARDEN.—Vegetable marrows, cucumbers, and melons may still be sown; the latter require the most heat, and cannot be well fruited unless they can enjoy a temperature of 70° to 80°, and five more degrees of bottom-heat. Pumpkins and gourds of all kinds, as well as Stockwood, Southgate, and short prickly cucumbers, may be grown to great perfection in the open air, by starting the seeds in a gentle heat, and when the plants have formed their rough leaves, turning them out on a bed of dung or loam well enriched, and giving them the protection of hand-glasses for the first fortnight. Those who have no hand-glasses should protect them every night till June, by turning over each plant a flower-pot with the hole stopped. Ridge cucumbers bear well, and give little trouble; the simplest way of growing them is to cut a trench three feet wide and two feet deep, and fill this with any littery rubbish in a fermenting state; long, half-fermented dung is, of course, the best. Soil it over nine inches deep with the stuff that was taken out, and then sow in patches of three seeds, eighteen inches apart. Pots or hand-glasses should be put over each patch of seed till they come up, when they should have air by degrees, and protection against night frosts, and to be thinned to the strongest plant in each patch, as soon as they have made their rough leaves. Cucumbers and gourds should not be stopped, but allowed to ramble as they will, either on the ground or a rough trellis. They should have abundance of manure water in dry weather, and the fruit cut as fast as it is ready, as, if one is left to ripen, the vines cease to be prolific. Trenches should now be made for celery, and six inches of rotten dung forked into the bottom of each. A dull or showery day should be chosen to put out the plants, and plenty of water given during dry weather. Sow beet, marrow peas, broad beans, kidney beans, and runners; turnips, lettuce, turnip-radish, and other salads, as required for succession. For successional crops of spinach the prickly sort will be found the best now, as less likely to run during hot, dry weather. Look to seed-beds, and transplant; well hoe and clear the ground as may be necessary. The use of liquid manure and frequent stirring of the ground between growing crops will hasten and improve the growth of all things.

FLOWER GARDEN.—We would advise those who have not had much experience in bedding to defer the putting out of their stock till towards the end of the month. There is nothing gained by the attempt to save a week, for we frequently have bitter nights, and north-east winds, even till the last week in May. The middle of the month is the earliest time at which we would put out bedding stock anywhere near London; farther north, we would wait till another fifteen days; but in the south they are always in advance of us Londoners. Successional sowings should be made of all hardy annuals that may be required to succeed those sown in March, and tender kinds, such as asters, zinnias, etc., may now be sown in the open ground. This is a good time to sow hardy and half-hardy perennials

of all kinds, to get strong plants for winter, either to remain out or have the protection of a frame, or to take up and pot for early blooming in the greenhouse. Lovers of the Chinese primula should sow now for the next spring. Late planted roses should have plenty of water, and the surface mulched, and similar treatment given to hollyhocks and chrysanthemums put out last month. Carnations and picotees should be staked without delay, and their shoots thinned. Part and plant polyanthus and primroses that have done blooming, and give them a rich loam and a shady aspect. Where it is intended to have new gravel, it would be advisable to defer it till the beds are filled, and the whole garden acquiring its full summer gaiety, a coating of fresh gravel then will add much to its fresh and bright appearance.

GREENHOUSE.—Continue to strike bedding stock for late blooming. Fuchsias, geraniums, verbenas, and petunias make beautiful specimens for pot-blooming in the autumn, if struck now and kept regularly stopped till July. They should not have a high temperature, fuchsias especially, which like shade and moisture. Cinerarias done blooming should be cut down and planted in rich soil, in a cold frame, to furnish offsets for potting. Camellias and azaleas that have made their young shoots should have a little more ventilation to prepare them to go in the open air next month to ripen their wood. All growing plants, and especially hard-wooded ones, must be regularly stopped, and have plenty of air, to insure a sturdy, short-jointed growth. Early-flowering pelargoniums out of bloom to be cut in and allowed to break before repotting them, and the syringe and fumigator kept in use, as may be necessary, to destroy red-spider and green-fly. Fire-heat should be dispensed with as much as possible, preparatory to clearing and cleaning out the house.

STOVE.—Pines must be shaded on bright days, and the soil about them kept regularly moist, and liquid manure used frequently. Suckers should be removed as soon as they make their appearance, except so far as they may be required for stock. Queens never produce good fruit unless the suckers are removed early. Young pines for winter fruiting should be in a rather light soil, to prevent excess of moisture from stagnating about them. Vines that have their roots in inside borders should be liberally supplied with water, and the shoots should be tied in, in good time. Vines in pots will require frequent supplies of liquid manure, and stopping of laterals must be attended to, to regulate the growth. Red-spider must be kept in check by the use of sulphur; and the best method of using it is to paint the pipes with a mixture of sulphur, lime, soot, and water. Examine the bunches occasionally, and thin them regularly, to promote their beauty and the size of the berries. Melons just planted must be kept close and warm till the roots get to work, and then a short-jointed growth should be encouraged by moderate ventilation and abundance of light. Average temperature for pines, 75° at night, 85° to 90° by day; for general collections, 65° to 70° at night, and 75° to 85° by day.

In sowing turnip or cabbage seed during the summer season, it is most essential to keep a sharp look-out for the turnip-fly. As prevention is better than cure, it is advisable to dust the seed-bed with soot occasionally until the plants are in the rough late. The soot must not be too fresh, and it should be applied when the plants are moist from either the dew or rain.

GARDEN GUIDE FOR JUNE.

KITCHEN GARDEN.—Asparagus not to be cut after the 15th, then to be cleaned over, and allowed to grow. Celery to be got into trenches as fast as the ground can be made ready by the removal of other crops. Take up each with a ball, and do not injure a single leaf. Hoe over those that are established in trenches, to break the surface that has been hardened by watering. The ground will be now, for the most part, covered, and everything in full growth. The hoe must never be idle; weeds grow faster than the crops, and exhaust the soil rapidly, and, if allowed to seed, make the mischief worse. Next to keeping down weeds, the most important operation is that of watering. Plants, when first put out, should not be drenched to excess, or the chill will check them more than a drought would, and it is better to trust to moderate watering and shade combined than to keep the soil saturated about plants that have barely taken root. Cucumbers, gourds, tomatoes, and capsicums may be put out; the soil should be rich; and, for tomatoes, a sunny aspect must be chosen. Manure-water should be freely used to all crops in full growth, and especially to strawberries, but there should be two or three waterings with plain water to one with liquid manure. Sow beet, early horn carrots, scarlet runners, and French beans, turnips, lettuces, radishes, cabbages, spinach, endive, cauliflower, and peas and beans. All salad plants should have a shady position, or they may run to seed. Dress asparagus and seakale beds with one pound of salt to every square yard, and give asparagus beds strong doses of liquid manure from horse-dung.

FRUIT GARDEN.—Apricots to be thinned, young shoots nailed in, caterpillars destroyed, and water-engine used smartly, if any sign of fly, which rarely troubles them. Search among raspberries every morning for snails, which take shelter on the stakes and among the side-shoots. If large fruit are required, thin the blooms at once, and give liquid manure. Stone-fruits look well this season, and no blight yet; but it may come suddenly, and must be prepared for. Disbud and nail in. Pot trees to have plenty of water, and, if weakly in their new growth, pretty strong liquid manure will be of material assistance.

FLOWER GARDEN.—French and other asters may now be turned out in the places where they are to bloom; make the ground rich, and choose showery weather. If the place is infested with snails, plant a few small lettuces behind the back row, which may be pulled

up as soon as the asters are well rooted. Those to flower in pots to have a good shift and cold frame. The dwarf varieties are the best for the latter system of culture. Newly-made lawns require a little special care at this season. If the grass is thin, it must not be mown and swept in the usual way, for the roots of young grass suffer from the effects of a hot sun when there is not a close bottom to preserve moisture. It is a good plan to mow early, and leave the mowings till the evening, then sweep and clear up, and the grass will have twenty-four hours from the morning before the sun comes on it again. Where walks look dingy, a turning with a fork and a good rolling is often as effectual a reviver as a supply of new gravel; but if the old gravel is of trifling depth or a bad colour, a new coating will complete the beauty of the garden, and give it a necessary finish. Dahlias planted out to be staked before the roots extend. Plant out all that are in pots at once; they will do better in the ground now than with any more nursing. The shoots of dahlias may be bent down, so as to render very short stakes sufficient. Those not staked should be attended to forthwith; indeed, the stakes should be put in at the time of planting, so as to avoid damage to the roots when they have begun to grow. Carnations, picotees, and pinks may now be propagated by pipings on the north side of a fence, or in pots, half filled with sandy loam. The old plan of striking them in heat and in exciting composts is quite unnecessary. Ranunculuses will want water frequently; they cannot endure drought, and beds of valuable kinds must be placed in the same way as tulips, with netting or canvas. Pansies strike readily from short side-shoots; the old hollow stems will strike also, but never make good plants; the new growth is that to be depended on. Annuals of quick growth, sown now, will bloom late for succession. Nemophilas never make a better effect than from sowings in June, in moist, shady places. Asters and balsams to be planted out during moist, dull weather. Perennials should be sown for next season's blooming, so as to get strong plants. Sow thin in nursery beds, and prick out the plants in rows as soon as they make rough leaves. If left crowded together, they grow spindled, and never make strong plants. Americans newly planted must have abundance of water, overhead as well as at the root. Remove by carefully snapping out with finger and thumb the dead blooms of rhododendrons and azaleas, to prevent seeding. Auriculas will want occasional fumigating; keep them in a cool place, on a hard bottom, and pour water amongst them on the ground surface to cause a moist air. An old light may be rested on pots over them during storms; otherwise, let them have the benefit of all showers.

GREENHOUSE.—To prolong the beauty of the plants in flower, put up a shading of tiffany. Azaleas not yet done growing keep moist and shaded, but beware not to push the growth too far, as, unless they are well ripened and rested, there will be few flower-buds formed. There is not much danger of that, however, just yet, except with those forced early. Plants that are leggy are likely to throw out shoots along the stems, if laid on their sides. Cinerarias may now be earthed up, to promote the rooting of the suckers.

Throw away all seedlings of inferior quality, and propagate only the best. They require a cool, shady place while making suckers, which are to be removed as soon as rooted. Sow seed for next year, and pot off rooted cuttings. Camellias may be got out in a shady place, on a bed of tiles or coal-ashes, and kept frequently watered. If kept in the house, there must be air on night and day. This hot weather will ripen the wood to perfection for next year. Fuchsias, keep well shaded, well watered, well ventilated, and with a cool, moist bottom. Plants from spring cuttings will be useful in five and six-inch pots, to keep the house gay in company with balsams and other summer flowers. Pelargoniums done blooming should be cut in, and allowed to break before repotting. They should be kept rather dry, so as to break slowly, and, when potted into small pots, put in a cold frame; and kept close, till they begin to make fresh root, when they must have plenty of light and air. The time is now arriving for clearing out the house, and giving it any necessary clearing and repairs, and cold frames should be provided in good time to receive those plants that are not to be turned out of their pots for the summer.

STOVE.—Liberal waterings must now be given, and abundance of air, especially among hard-wooded plants. Pines, same treatment as last month. New Holland plants should be encouraged to grow, and liberal shifts given as required. A large number of the orchidaceous plants imported from the eastern parts of the world will now require abundance of water. Advantage may be taken of sun-heat to lessen the expenditure of fuel; but there must be some ventilation. Orchids on blocks and in baskets require to be well soaked occasionally; and for this work a large wooden pail will be found the most useful, as it will admit of the plants being properly immersed, without injury to the roots or leaves. *Cymbidium eburneum* and *C. giganteum* will probably require repotting now, and, in so doing, strong plants may be increased by dividing the bulbs.

NEW BOOKS.



THE "Tropical World," by Dr. G. Hartwig (Longmans) treats of "aspects of man and nature in the equatorial regions of the globe." It is a fine useful compromise between strong philosophy and entertaining anecdotes, and about as good an example of what a book of "popular" science should be as any we can call to mind. The author has selected a number of the most striking phenomena of equatorial climates for illustration, and he tells us of strange people, curious animals, great forests, wonderful rivers, and the insect and reptile productions of the torrid zone, in a series of light chapters, which usually contain as much information as anybody wants, and are lighted up with beautiful pictures and relations of romantic incidents.—"Scott's Orchardist," by Mr. John Scott, of Merriott, Somerset, has been noticed while in course of publication, and we

GARDEN GUIDE FOR JULY.

KITCHEN GARDEN.—Where early crops are coming off, clear the ground and dig it over at once. Plant out Brussels sprouts, green collards, kale, savoys, cabbages, broccolis, etc. If the plants are crowded in the seed-bed, it is best to get them out at once. Have all ready, and in the evening put out as many rows as possible, and give a little water to every plant. This is better than waiting for rain, which may be so heavy as to render the ground unfit to be trodden on, and, if succeeded immediately by heat, the plants will flag as much as if put out in dry weather, whereas, being already in the ground, the smallest shower benefits them. Seed-beds for winter spinach should now be made up and well manured. Peas and kidney beans may be sown this month, for late supplies, and at this season it is as well to sow early as well as late sorts. Gather kidney beans close; every pod left to ripen checks the productive power of the plant. Take up onions, shallots, and garlic, as they ripen, and store for winter. Give asparagus-beds plenty of liquid manure, and use the grass mowings from the lawn as mulchings, to prevent the soil from cracking. Earth up celery for early use, but the rows that are not forward must be kept open and well watered, as the plant grows very slowly after being earthed up, the object of the earthing being to blanch it only. Sow saladings for succession.

FRUIT GARDEN.—Put netting over currants, gooseberries, and cherries, to keep the birds from the fruit. To retard or keep hanging currants and gooseberries, cover with mats. Raspberries to have their suckers reduced to four or five to every stool; those left will rise strong, and ripen their wood well; but a forest of spray will be all weak alike, and at the winter pruning there will be a temptation to leave all, because for strength there will be little choice. Never dig between raspberries; it causes them to throw their suckers a long way from the stools; but surface manuring at this time of the year, and no disturbance of the earth, causes strong suckers to rise near home. Strawberries to be potted as soon as rooted, as they make roots faster in pots than in the open ground; and should we have a chilly autumn, a few of the best of the plants can be kept under glass, to ripen their crowns. Lay a few more of the best runners in pots, cut away all weak runners, and supply water liberally to runners and old stools. As soon as rooted in pots, remove to a frame and place upon a bed of some moist material, where they will soon fill the pots with roots. Remove weak runners, and peg down in pots or on the border a few more of the best for making new beds.

FLOWER GARDEN.—Budding roses is the most important operation this month. After heavy rains is the best time, as the sap then rises freely. The stocks should be vigorous, and if the weather continue dry, and if the sap flows slowly, a drenching of liquid manure or plain water, for two or three nights in succession, will prepare them, without waiting for rain. Cuttings of all kinds may now be struck out of doors; antirrhinums, phloxes, pentstemons,

alyssums, dielytras, etc., and cuttings of laurels, aucubas, and other shrubs, must be struck in the shade; but geranium cuttings should be struck in the full sun. Where long ripe branches of geraniums can be spared, they are better than soft shoots; and, if pinched for time, strike a lot of such ripe branches in five-inch pots, half-a-dozen in a pot, put all round, and they need not be potted separately till spring, when started for bedding out. Dahlias require special attention now as they come into bloom; earwigs are very destructive, and must be trapped with bean-stalks, or a handful of hay may be stuffed into an empty flower-pot and put on a stake, and the vermin shaken out into salt and water every morning.

GREENHOUSE.—Show and fancy pelargoniums done blooming must be turned out and placed in a sheltered position. After a week's exposure, cut them in to the first or second eye at the bottom of each shoot, and place them in a cold pit, to make their new growth. They must now, for some time, be kept from growing rapidly, and have but little water. When they have broken well, they must be repotted into the smallest pots their roots can be got into, and all the old soil must be shaken off, and the roots moderately thinned. Shift all greenhouse plants required for late blooming, and grow them on to a good size before allowing them to blossom. Cinerarias for winter blooming must have good culture and shifts as required, and camellias may be shifted, if necessary; but, if well potted in the first instance, they will flourish in the same pots for two seasons in succession, and to overpot them is to do them injury, from which they may never recover.

STOVE.—As pines colour, they should be kept moderately dry. Plants shy of fruiting should be kept dry for awhile, to cause a check, and then be liberally soaked, and kept warm and moist, and the new growth will result in the production of fruit. But to check them before they are well matured may cause premature fruiting, and should not be done until the plants have had a long course of liberal culture. Young stock must be encouraged to grow strong, by allowing plenty of room in which to expand their leaves; give plenty of water, and repot as necessary. In vineries great attention must be paid to keeping the foliage healthy to the last, as on this depends the maturation of the buds that are to fruit next season. Keep up a moist atmosphere, and watch vigilantly against red spider. Plants heavily laden with fruit must have the assistance of strong manure water. Be careful not to cut away laterals too freely, as they are most useful in helping the maturation of the bunches.

HORTICULTURAL AFFAIRS.



ROYAL HORTICULTURAL SOCIETY.—SUMMER EXHIBITION, June 4 and 5.—This exhibition, although weak in some respects, was, considered as a whole, most satisfactory and interesting. The Pelargoniums, Azaleas, and Heaths, which may be had in prime condition during the early part of June, were omitted from the schedule, and the tent was, consequently, not so bright as it might have been. The chief interest of the exhibition centred in the new plants, which were presented in much larger numbers

July.

storeroom ; or rub off the little bulbs and store in nets or chip boxes. The root bulbs are excellent for stews and other purposes for which onions are employed in the kitchen, and the top bulbs make a better pickle than any other kind of onion, their flavour being peculiarly sweet and mild. The tree onion is but little known, yet it is at once good and profitable, provided it obtains the few small attentions it requires at the proper time. If the crowns are allowed to lie on the ground, as they will do if unsupported, there is a likelihood of a considerable proportion of the crop being lost through the assaults of vermin ; snails, slugs, and woodlice having a peculiar liking for this particular sort, owing, no doubt, to its fine flavour.

THE SELECTION OF VARIETIES must be determined by the requirements of the cultivator. For a good crop of useful onions any of the race of *White Spanish*, such as *Reading*, or *Nuneham Park*, will answer every purpose, and as they keep well and look well, they are among the best of market onions. For autumn sowing, the *Tripoli* or *Strasburgh* sections are the best ; and, perhaps, the very best two sorts amongst them are *Red Tripoli* and *Giant Rocca*. If particularly large onions are required, sow *Giant Madeira*, both in the open ground and in a frame in August or September, and plant out in March, in a bed of rotten stable manure six inches deep, made on a bottom of hard soil. None of the *Madeira* or *Portugal* race keep long, and therefore there should be no more grown than are likely to be required for autumn and early winter use. Amongst the late-keeping sorts, *James's* is considered the best. A true sample of this variety should be tall, and broader at the shoulder than the base, somewhat of the shape of the great oil-jars which figure in the story of "Ali Baba ; or the Forty Thieves." A fine onion for main crop is *Trebons*, which may be known by its appearing as if pinched by finger and thumb near the root. The *Welsh Onion* ranks high with many who require salad onions in winter ; but we could never find any use for it, always having plenty of silvery little onions from autumn sowings, which are certainly preferable to the rather puffy green blades of this variety, which does not produce bulbs. However, the *Welsh onion* is very hardy, and may be very useful in cold climates, where the *Tripoli* or *Spanish* onions refuse to stand the winter. Moreover, if the green blades are desired in early spring for salads, as in many houses they are, there will always be found plenty rising from old bulbs in the store ; and while these are fresh and crisp, and fully exposed, they are excellent, both for soups and salads.

S. H.

THE GARDEN GUIDE FOR AUGUST.

KITCHEN GARDEN.—The various kinds of winter greens claim the first attention ; and it is necessary to insure at once a good supply, and a variety. By this time *Scotch kale*, *Brussels sprouts*, *broccolis*, *savoys*, etc., ought to be strong, and where they have been planted between rows of peas, to stand the winter, should now be

August.

looked over, and every other plant taken out, to make fresh rows, if they are at all crowded. Cabbages of most kinds may be sown in the second week of August. Sow also prickly spinach on slopes in rich soil, and plenty of Hammersmith cabbage and black-seeded cos lettuce. Sow cauliflower from the 7th to the 20th to keep over winter in frames. The summer-sown endive will now be strong enough to plant out on slopes, or raised beds. Give plenty of water, alternating with liquid manure, to celery, and do not earth it up until it is well grown, the earthing being only to blanch it for use. In good open situations, vegetable marrows, for a late supply, may still be planted. Use grass mowings to mulch the ground between crops that are likely to suffer from drought. Earth up the earliest rows of celery and leeks; thin out the rows of parsley, so as to get rid of every plant not well curled. Remove decayed leaves from cucumbers and gourds, to prevent the growth of moulds and fungi about them in damp weather, and take cuttings, or sow seed, for cucumbers to fruit during winter.

FLOWER GARDEN.—After the middle of the month commence to propagate bedding plants for stock; of geraniums, ripe hard shoots make the best plants. Fuchsias come best from the points of young growing shoots. Strike verbenas and petunias from the points of young shoots. Herbaceous plants may also be struck in quantities to keep over winter in frames, such as pansies, dielytras, double wallflowers, double Canterbury bells, double feverfew, and hollyhocks. Keep dahlias and hollyhocks well supported, and put stakes to chrysanthemums before their heads become heavy, as a protection against storms. Pompones may still be struck for blooming in pots. Plant out pinks and carnations in nursery beds, in well-manured loam. Give plenty of water to chrysanthemums, with occasional doses of strong liquid manure. Seed of pansies may be sown, as may also most hardy annuals, to stand over winter for early blooming next spring; the latter should be sown thick, on poor, dry, hard ground, to induce a stubby and hardy growth. Some seed should be saved for a second sowing in September, as, in the event of protracted warm weather, such as we had last year, some of the first sown may bloom this season. The sorts to sow now are calliopsis, clarkia, colinsia, godetia, larkspur, lupinus, nemophila, nolana, French poppy, and dwarf schizanthus. There is still time to raise a stock of hardy perennials for next season, but not a day should be lost in getting in the seed. The most useful are antirrhinums, delphiniums, dianthus, geum, hollyhocks, Indian pink, lupinus, phlox, potentillas, silenes, sweet-williams, and wallflowers. Those already up in seed beds should be examined and transplanted, before they are drawn through being crowded. Plants left for any length of time to spindle are likely to perish in winter, and never can make such good specimens as those that have had plenty of room from the first. Continue to bud roses and fruit trees, choosing damp, dull weather—they take best just after heavy rain. In budding on the Manetti stock, enter the bud, just above the collar, close to the ground, the proper mode of planting afterwards being to sink the base of the bud below the surface, so that the rose will root as well as the stock.

Pompones chrysanthemums may still be increased. Either the tops may be struck for pot blooming, or shoots of eight or ten inches in length may be layered into five-inch pots, and removed when moderately well established. Dwarf plants of the pompones and lilliputian varieties are very useful for decorative purposes at the end of the season, and are adapted to purposes for which large bushy plants would not be so suitable. The large flowered kinds do not bear to be stopped so late as the pompones.

GREENHOUSE.—Show and fancy pelargoniums that have been trained out and pruned should be repotted as soon as they have broken regularly. Put them into the smallest pots into which their roots can be got, so as to allow of a series of shifts till they are once more in their blooming-pots. Young plants and greenhouse shrubs should be well hardened now, before going to their quarters for the winter. Let camellias and azaleas have plenty of sun and little water. Summer-struck geraniums, achimenes, and fuchsias, may be got into bloom now, to keep up a display till Christmas. Shift all forward stock required to bloom early. Cinerarias should now be strong, and must have no check; see that they are kept clear of fly, for they are very subject to it. A cold pit is the best place for them. Whatever needs potting pot at once. Late shifts result in deaths during winter. All plants winter best when their pots are full of roots.

STOVE.—All specimen plants in free growth must have attention now to secure a perfect ripening of the wood before the season closes. Let everything have now as much sun as can be borne without injury, which is best done by removing the shading from part of the house, and there placing whatever is likely to bear the exposure. Use water freely on the paths and beds, to keep up a moist atmosphere, and give air at seasonable times liberally. Plants to be used for autumn and winter decoration ought now to be in a thriving condition; if any want a shift, attend to it at once. Stop young plants of Euphorbia, Aphelandra, Justicia, Poinsettia, Ixora, *Æschynanthus*, etc. As the month progresses, shut up earlier, and give less and less water to the roots of plants, and especially those which should be going to rest. If we have a period of dull, chilly weather, use fire-heat, for a chill will do more harm now than in a month or two hence, when vegetation will be in a state of repose.

ORCHID HOUSE.—Orchids in full growth must have moisture and heat sufficient to maintain them in health, but the judicious cultivator will not often have to light a fire this month. Those going to rest to be encouraged by removal to a cooler part of the house, where they must have less water, but be kept plump by frequently sprinkling the paths and stages. This is a good time to separate pseudo bulbs for increase of stock, and to pot on small plants to get them established before winter. Orchids that have been a long time in the same pots need top-dressing with fresh material. Shut up at four till the third week of the month, and then shut up at three. After shutting up, syringe gently with water of the same temperature as the house.

FRUIT GARDEN.—To keep the fruit as long as possible, throw

August.

nets over fruit bushes to keep off the birds, and give a little shade to keep a few bunches hanging for a late supply. Put wasp-traps about vines and peaches. Nail in all good shoots on wall trees, that they may have the heat of the wall to ripen them. Encourage in every possible way the ripening of the wood of the season. If any trees have been allowed to become crowded, thin them a little now to admit the sunshine amongst the well-placed shoots and spurs. Windfalls to be sent into the house every morning for immediate use. Gather fruit in dry weather, and, as a rule, not till quite ripe. Plant strawberries where it is desired to form new beds; lift the runners carefully, and after they are planted keep them well watered until they are nicely established.

HORTICULTURAL AFFAIRS.



ROYAL HORTICULTURAL SOCIETY.—EXHIBITION OF PELARGONIUMS, July 16 and 17.—Upon this occasion the Society offered prizes for collections of specimen zonal, nosegay, and gold, silver, and bronze zonal Pelargoniums, and in addition to these prizes were also offered as follows:—By Dr. Denny, for varieties raised by himself, and distributed by Mr. W. Paul; by Mr. George, of Putney, and Mr. Smith, of Tollington Park, for varieties raised by Mr. George; by Mr. Pearson, of Chilwell, for varieties raised by himself; and by Mr. H. Cannell, Station Road, Woolwich, for varieties not in commerce. The prizes in all the classes were exceedingly well contested, and consequently all the classes for zonal pelargoniums were well represented. The specimens staged in the principal collections were exceedingly good, and altogether it was the most successful and thoroughly representative affair of its kind that has yet been held, and a number of remarkably fine sorts were exhibited.

ROYAL BOTANIC SOCIETY, July 8.—The exhibition held in the gardens of this society on the above-mentioned date was very poor. The table decorations were very good, and a few respectable collections of plants were shown. In connection with the exhibition an evening *fête* was held. The latter was well attended, and was unquestionably one of the prettiest sights yet witnessed in the metropolis. The weather was fine throughout, and not too warm, and the *fête* was, as a whole, and in every particular, thoroughly successful. The gardens were brilliantly illuminated with thousands of small oil-lamps, which were placed round the flower-beds and ornamental vases, and in every conceivable position throughout the grounds. From the anemometer tower on the mound Gramms' patent light, which has been recently tried at the Houses of Parliament, gave a most powerful illumination, while from seven other prominent parts of the gardens electric lights were displayed. At intervals the gardens were further illuminated by magnesium lights and various coloured fires, and at these periods the scene was the prettiest imaginable. Experiments with electric lights were also exhibited in the course of the evening in the summer-house near the principal gate, and Holmes' patent danger signals were practically shown on the lake. The conservatory at the end of the principal avenue was lit up with magnesium burners from the outside and with oil-lamps of varied colours within, and in front was a dais for the President and the Duchess of Teck and their friends.

THE ROSE SHOWS.—The exhibitions of roses held in various parts of the country during the season have been quite up to the average of former years. The earliest exhibitions, which were held at Bath and the Crystal Palace, were not so good as usual, for the flowers appeared to be wanting in substance, and the lighter varieties lacked freshness. At the exhibitions at Hereford, Oxford, Frome, and more especially at that held in the Gardens of the Royal Horticultural Society, the majority of the blooms staged were remarkably good. Indeed the finest blooms at South Kensington have probably never been surpassed. To give a report of each of the exhibitions in detail would occupy more space than can possibly be spared, and

THE GARDEN GUIDE FOR SEPTEMBER.

KITCHEN GARDEN.—Where onions have been cleared off, is generally the best place for cabbages for spring use, because the ground having been well-manured for the onions, is in good heart, and yet, so far relieved of manure by the onions, there will be no fear of a rank growth, such as will cause the plants to suffer from frost. Plant out, as spaces become vacant, first digging deep and leaving the surface rough. The planting, however, must be firm, and damp weather should be chosen for it. It is too late now to sow any more winter greens or onions, and if the stock is short, it will be better to get a supply of plants than waste time and patience in sowing. Thin winter spinach to six inches from plant to plant; thin the rows of lettuce that are to stand the winter: but not severely, because, in the event of severe frosts, the plants protect each other, if somewhat close together; on the same principle, broccoli and cauliflowers left to risk it in the open ground, should be not more than fifteen inches apart each, and the ground for them should not, at this season, be very rich, or they may suffer in severe weather. We generally plant the spring broccoli without manure, and in the spring, as soon as they commence their new growth, give them regular waterings with house sewage, and so secure fine heads; cabbages we treat the same, so as to avoid the necessity of manure in the autumn, which renders them tender in exposed situations. Earth up celery as the rows require it, in dry weather, but if not well grown, give plenty of liquid manure, and postpone the earthing-up till the plants have made good substance. This is the best time to form new beds of horseradish, the crowns to be planted fifteen inches deep, and six inches apart, in very rich and well trenched soil. Continue to sow saladings, and gather seeds as fast as they ripen. Potatoes to be taken up as the tops wither; carrots and beet-root may remain till the frost cuts off the foliage, and no longer, but parsnips may be left in the ground, trenched out as wanted for use, unless the ground is required, in which case, store them in sand.

FLOWER GARDEN.—Plant out pinks and carnations, and rooted cuttings of herbaceous plants. The beds of seedlings must be looked over and thinned, and the thinnings planted in fresh plots of newly-dug, and firmly-trodden ground. This month commences the season for planting bulbs. The first lot of hyacinths and tulips should at once be got into pots, and plunged in coal-ashes, or coarse sand, so as to quite bury them, and keep them only moderately moist, and as much as possible free from the action of the atmosphere, so as to induce a root action before the foliage is produced. Hyacinths may also be planted in beds and borders, but tulips should not be put in the open ground till next month. A very effective way of using hyacinths is to put them in patches of seven, one in the middle and six round it, every separate patch to be of a different colour. Cuttings of bedding-plants may still be taken freely, but there should be no delay, or they may not be well rooted before cold weather sets in. This and next month are the best times for striking

calceolarias. Take off the young shoots from near the bottom of the stool, and put them pretty close together in five-inch pots, well drained, and filled up to near the rim with a mixture of peat, loam, and sand, equal parts, and half an inch of pure sand on the surface. China roses may also be struck now in pots in the greenhouse, and they do safest under hand-glasses. A second bloom, to last till Christmas, may be obtained from fuchsias, by cutting in the young wood, and giving the plants a little heat to start them afresh. Geraniums struck early in the summer, will now be coming into bloom, to keep the greenhouse gay all the winter.

GREENHOUSE.—If any subjects requiring to be repotted have been neglected, there must be no time lost to give them a shift to enable them to make new roots before winter sets in. A border under a south wall is a good place for plants that require to be well roasted before being housed. Bedding plants should be got into small pots as fast as they make good roots in the borders, or can be spared from the decorative grounds, if worth keeping. Petunias, verbenas, and tropæolums come so readily from spring cuttings, and make as good plants as from autumn cuttings, that it is waste of glass to keep any large stock of cuttings through the winter. Keep the houses gay with balsams, cockscombs, fuchsias, lilioms, gladioli, coleus, amaranthus bicolor, heliotropes, and plants with fine foliage. Wherever worm-casts are seen in pots, turn out the balls, and the worms can then be picked out with a stick. Sometimes a dose of manure-water will cause the worms to struggle up to the surface. Plants in conservatory borders, which are now past their best, to be taken up, and, if worth keeping, pot them, and place on bottom-heat for eight or ten days, as they will winter better if the pots are full of roots. Winter-flowering begonias to have a good shift in a compost of turfy loam and leaf-mould. Pot off a lot of bulbs at once for early bloom, and plunge them in coal-ashes, and give very little water. Keep all houses open as much as will be safe; house tender subjects that are likely to suffer from wind and rain. Pot a few bulbs for early bloom. Ornithogalum, Ixia, and Sparaxis force well, and Narcissus bulbocodium will be useful if kept in ordinary greenhouse temperature for early bloom.

STOVE.—Remove shading as much as will be safe, and place subjects that are going to rest in the coolest part of the house. See that all the winter-flowering plants are sufficiently potted, and any that are pot-bound and must not be checked by a shift, mulch with sheep's dung, or assist by means of liquid manure. Plants with ornamental foliage will be useful now that flowers are scarce. In giving water, take care to avoid a chill, and in every case see that the drainage is perfect, as there is time now to repair any small mischief before winter. As the month advances, let the heat of the house decline, and generally use as little fire-heat as possible, especially where the stock consists chiefly of plants that will be at rest all winter. Great care, however, must be taken that soft-leaved plants do not get affected with mildew. A few tropæolums struck now will be useful in the stove for winter blooms.

little value if these are allowed to grow unchecked. It need hardly be said that matters of this kind should have attention when the weather is unfavourable for outdoor work.

Potatoes and all the other roots mentioned may, if there is no root-house, be kept in clamps. In making clamps, select a dry, sheltered position, and if the subsoil is naturally dry, open out a trench about four feet in width and two feet in depth, and of a sufficient length. In this lay the roots, bringing them to a point at the top, and then cover with a good thickness of straw. Over this put not less than twelve inches of soil, and make it firm and the surface smooth, to throw off the heavy rains. On wet soil lay the roots on the surface in the manner described, and obtain the soil for covering them by digging a trench two feet in width all round, and as deep as may be required for obtaining enough soil for covering the clamp.

THE GARDEN GUIDE FOR OCTOBER.

KITCHEN GARDEN.—Asparagus to be cut down to the surface of the ground, be well cleaned, and covered with four inches of half-rotten dung. The spade must never be used either on the beds or in the alleys. Cabbage to be hoed between, to destroy the weeds which have abounded since the autumn rains commenced. Plant out the main spring crop, and earth up the collards. Those last sown to be pricked out to strengthen on four-foot beds. Cauliflowers to be planted out under frames and hand-lights, and some potted. If there are many plants still left in the seed-bed, prick them out on a warm slope, or make up a raised bed for them, so that they can have the protection of mats or hoops during sharp weather. Rhubarb to be forced may now be taken up, and laid on one side until it is time to put in the boxes, or whatever other position it is to occupy when forced. In storing potatoes, be sure they are dry first; if taken up in wet weather, spread them out in a shed or outhouse, but do not expose them to the light more than can be helped. Parsnips keep best in the ground, to be dug as wanted. Beet to be taken up at once; cut off the leaves an inch above the crown, and avoid bruising or cutting the roots; carrots treat the same; store both in sand or dry earth. Earth up cardoons; take up scorzonera and salsify, and preserve in sand. Winter greens can scarcely be overdone on the ground, though they may be in the pot. As there is now much ground vacant, another hunt of the seed-bed will show some plants worth moving to plant out; if they do not make great hearts, they will nevertheless be useful in the spring.

FRUIT GARDEN.—Fruit trees that are making gross shoots may often be compelled to direct their energies to better results by some disturbance of their roots. We have had, before now, to heel over a whole plantation of plums when a warm autumn and moist weather set them growing again late in the season. Of course, large trees must not be so dealt with; but they are more obedient to the wish of the cultivator, and rarely grow too much when in a good bearing

state. Make stations ready at once for all trees to be planted. A deep hole opened at the time of planting is a mere mockery; the ground should be deeply stirred now, and left in a very rough condition; but the holes should not be made till wanted, as by that time they might happen to be full of water. It is a good plan, when about to purchase trees, to go to the nursery while they are in leaf, and mark all the trees selected with the purchaser's name. Let no fruit hang after this date; those not ripe must ripen in-doors; it is too much risk to leave them out any longer. Unfruitful trees may be improved by commencing at once to root-prune, manure, or drain the soil. The nature of the cure must depend upon the cause of barrenness. If the trees have attained a bearing age, and are over-luxuriant, root-prune by this simple method:—Open the soil three parts round each tree, at a distance from the stem of from two to four feet, according to the size of the tree. The roots must be cut back to a general average of two, or three, or four feet, except the part where the soil was not opened, where the roots will remain, of course, their original length. The roots cut back to be carefully laid out near the surface, and a little fresh soil used in filling in. Next season open the soil on the side left undisturbed the year before, and there cut the roots to the same distance as before, and so on annually or biennially, according to the growth they make. Old trees that have borne for many years, and are getting weak, to have the surface soil thinly pared off, and a layer of new soil laid down over the roots, and above that a layer of dung only slightly rotted. Where grapes are to hang some time, all decaying berries must be cut out from time to time, and the atmosphere kept dry. Cut away all the sappy and softer ends of the rods, without respect to the system of pruning adopted; this will cause the remaining buds on the rods to swell nicely, and promote their ripening.

FLOWER GARDEN.—American plants may be moved now better than at any other period of the year. Whoever plants these must be sure, in the first instance, that the soil is suitable. Many of the natural loams about London suit them admirably; and, on the other hand, there are many otherwise good loams in which they will not grow at all. It is only to be determined by experience on the spot; and where there is any doubt, the only safe course is to cart in peat from the nearest source of supply in the district. We use a mixture of yellow loam and peat from Wanstead—equal parts—and prefer it to all other soils for fine-rooted plants. Pontic rhododendrons and their varieties are the least particular about soil of any of the race. Some of the best hybrids will grow in any leafy mixture with plenty of sand. Clay or chalk will never do for any of the race, but loamy turf and leaf-mould are of great service, either to increase the bulk of peat where it is an expensive article, or to take its place entirely where it is difficult to obtain it. In any case, American plants must have a soil in which their fine hair-like roots can run, and quite free from salts of lime, which poison them; good fibry peat is the only material in which any great variety can be grown, and that is abundant in almost every part of the country.

As they never root deep, an excavation of two feet deep is plenty in the making of a bed. Bulbs of all kinds to be planted in beds and borders. Pot hyacinths in succession, so as to prolong the season of blooming. Carnations and picotees not yet rooted from layers must be taken off the stools and planted under hand-glasses; those with a few root fibres may be potted; having begun to root, they will soon gain strength. Border cloves may be propagated to any extent from cuttings in spring.

PLEASURE-GROUND AND SHRUBBERY.—Deciduous trees may be planted now *ad lib.* No occasion to wait for the falling of the leaf; never mind if they are as green as in July, take them up, and dispose of them as required; the shift will do them more good than harm. Fruit-trees, roses, forest trees, ornamental shrubs, and all such things, may be ordered in from the nurseries, and planted at once; and from this date every day gained is a real gain for the future well-doing of the trees, which will begin to make roots directly, for the ground is *now warm*, but from this time will get cooler every day, and the longer planting is delayed the longer will the trees require to make more new roots, on which their vigour next season will depend. Never plant while the ground is in a sodden state; if it does not crumble freely, wait a bit; meanwhile lay the trees in by the heels to prevent injury to their roots by sunshine and drying winds. Evergreen shrubs will move now better than in spring; the earth is warm and the air moist, and they will make fresh roots at once. This is the best time of the whole year to make alterations in shrubberies and wildernesses. Not the least occasion to wait for trees to be quite at rest before moving them; the fact is, if they are still growing, and are to be lifted, the sooner they are lifted the better, if only to put a stop to their activities. Hollies will move now with safety, as will aucubas, laurels, thujas, and all kinds of conifers. Extraordinary pains are taken to keep the root balls of trees intact in the process of transplanting, which we are firmly convinced are needless. In fact, we would always prefer to shake the earth off the roots entirely, sooner than plant any tree with a complete ball. The reasons why, we cannot make room for in this space, but the reminder may be useful to planters who, from past experience, have doubts about the value of keeping masses of earth about the roots in transplanting. When stripped bare, and every fibre exposed, a tree must be planted with much more care than when lifted with a ball by a machine, and dropped into a hole, and that extra care is a gain and an argument for the better practice.

GREENHOUSE.—Ericas can be better wintered in a pit than in the greenhouse. It is certainly best to let them taste as little as possible of fire-heat, though they must be kept safe from frost. A damp, still air, especially if a little warmed to suit the growth of soft-wooded plants, is most injurious to these nearly hardy and free-natured plants. Water only on fine days, and then as early as possible; keep the plants hardy, and if they get three or four degrees of frost on them, they will take no harm if kept dark till thawed. The result of such treatment will be short joints and a fine

bloom. Fuchsias going out of bloom, which are to be grown another season, should be put out of doors to harden them, and left unpruned till they have tasted a very slight frost; then cut them in slightly, and house in any moderately dry place, either light or dark, till they begin to break in the spring. Revise the whole stock of plants in pots as opportunities offer; to remove worms from pots, renew the drainage where it has got stopped up, and otherwise prepare for the casualties of winter. Greenhouse plants that have been standing out must now be housed, and those to be forced must be repotted, if needful.

PITS AND FRAMES.—Plants in frames will soon be infested with mildew now, if kept close or damp. Though nothing should go dust dry, it will be best always to defer watering till the weather is clear and bright, and then water well the first thing in the morning, that the pots and plunged material may be somewhat dry before night; one good watering will go a long distance now. Keep the plants clean by removing dead leaves, and cutting off the soft tops of any green shoots of geraniums, etc., which show signs of mildew.

NEW BOOKS.



APROPOS of our coloured plate and leading article, we have to recommend to lovers of lilies the best book hitherto published on those plants. *Notes on Lilies and their Culture*, by Messrs. TEUSCHEL & Co., of Colchester, is a nice little contribution to this great subject. We can hardly call it a book, and the authors do not pretend to be book makers. They are importers and cultivators of lilies, and know more about lilies than most people, and their manner of communicating knowledge does them honour. Whoever wants the book can obtain it through the post by sending 2s. 2d. to Messrs. Benham and Harrison, High Street, Colchester.—*The Art of Grafting and Budding*, by CHARLES BALTET, published at 37, Southampton Street, is a fair translation, suitably illustrated, of a famous French treatise.—*The Tropical World and The Sea and its Living Wonders*, by Dr. HARTWIG, have been revised and reproduced by Messrs. Longman, and in their latest improved form may be regarded as models for the writers of popular scientific books. These handsome volumes are equally adapted to awaken the curiosity of the young, and furnish recreation and useful knowledge to the mature. Dr. Hartwig knows what he writes about, whereas it is the rule for such as do not know, to imagine that knowledge is not needed for the “popularization” of any branch of physical science.—*The Canadian Fruit, Flower, and Kitchen Garden*, by D. W. BEADLE, published by Campbell & Son, Toronto, is a nice octavo volume, well done throughout, and a credit to the horticultural literature of the Dominion. For the most part, no doubt, the Canadian gardeners have hitherto trusted to English books; but it is better that books should be written for them by horticulturists experienced in the Canadian climate and the tastes of the people,

Fill with water as many soda-water or other small bottles as there are bunches, and suspend them in a room or cupboard, then cut the bunches with a portion of the shoot, and insert the end of the latter in the bottle. They can be kept in this manner for several months.

GARDEN GUIDE FOR NOVEMBER.

PROCEED with lifting and storing root crops as fast as the weather and the state of the soil will permit. Also clear all quarters of stumps of cabbages, cauliflowers, and other exhausted crops and manure, and then dig them up, leaving the soil very rough on the surface, or throw it up into ridges. It is a very good time to prepare the ground for seakale beds. The roots should not be planted till the spring. The ground must be deeply trenched and liberally manured, and the manure thoroughly incorporated with the soil. Begin forcing now by first placing the seakale pots over as many stools as are to be started, and fill the spaces between and over the pots with a mixture of stable dung that has been once turned, with leaves, straw, and other litter, beating it firm as you proceed, and leaving the whole smooth and tidy nine inches above the top of the pots. Where only small quantities of seakale are required, it may be forced very conveniently and cleanly in pots. Pot the roots singly in 24-sized pots, in a mixture of leaf-mould, rotten dung, and sandy loam, equal parts. Place the pots on the top of a brick flue or on a gentle hotbed, the bottom-heat not to exceed 60°. Invert over each pot another empty pot, stopping the hole of each with a piece of flat tile, over which press a lump of clay. About three-fourths of the complaints that reach us of the misbehaviour of fruit trees, and the failure of vegetable crops, and the unsatisfactory blooming of roses and many other things, have one common origin—the want of drainage. We cannot here enter into the details of the subject; but as this is as good a time as any to drain land that requires it, we again remind our readers that good drainage promotes the warmth and fertility of the soil; and, on the other hand, a water-logged soil is almost poisonous to every kind of plants that come under the care of gardeners.

FRUIT GARDEN.—Currants and gooseberries should now be lifted if required, as the next year's crop will be less jeopardized by getting them early to the places in which they are to fruit. Fork in a good dressing of manure between the trees in old plantations. Put in cuttings of choice sorts; the cuttings to be straight ripe shoots of this year, and all the lower buds removed, so as to prevent the throwing up of suckers. Fruit trees to be planted as soon as possible; manure not to be used unless the ground is in a poor condition, and then a little fresh soil should be used with it if possible. In planting, keep all roots near the surface. Stake as soon as planted, to prevent rocking by the wind, and at the same time prune. Raspberries to have the old canes cut away, the new canes thinned

to three or four of the strongest to each stool, and a good mulch of half-rotten dung laid down over their roots.

FRUIT HOUSE.—Peaches in the forcing-house to be pruned at once; the roots top-dressed; the branches washed with a paste of clay, lime, and sulphur, and the lights put on. But give plenty of air. Vacancies may now be filled up in the peach-house, and nothing better for the purpose than bearing trees.

FLOWER GARDEN.—Roses planted now, though with leaves still on them, will begin to make fresh roots at once. In any case make the ground ready by manuring liberally where roses are to be planted. Briers worked this season may be lifted now, but they should never have a place in the rosery till they have made at least one full season's growth from the first starting of the buds. Plant firm, and stake at once. Slugs and snails are now very active during mild weather, preparing perhaps to make a good fill before hybernating for the winter. It happens that most people have time now to trap them, which they generally say they have not at other seasons. Brewers' grains or buttered cabbage leaves are the best traps known for these destructive vermin. They will leave any other food for these attractive baits, and may be trapped wholesale by inverting large flower-pots tilted off the ground by means of a few sticks over heaps of fresh brewers' grains. Tulip beds now to have the hoops placed over to be ready for mats or other covering in case of heavy rains. But the bed should be freely exposed for the present; there is nothing gained by covering too soon.

GREENHOUSE.—Camellias dropping their buds are the subject of frequent complaint. We have frequently advised the use of liberal waterings after the buds are set and the wood as hard as necessary, and we can only repeat that in the majority of cases the buds drop because the roots are dry. But watering on the ordinary plan is not always a remedy, for while the plants were out of doors in the summer the soil about the roots may have got hard and impervious to water, and now when water is given it all runs away next the side of the pot without moistening the roots at all. The remedy is easy enough. Fill a tub with soft water; then lower the plants into it a few at a time, and let them soak for an hour. The rush of air bubbles from the pots will prove what a dry state the roots had come to. After this soaking they will take water kindly. At every opportunity pass the whole of the plants through a careful hand, whose duty it will be to remove dead leaves, trim away dead snags or mildewed shoots, give water if needful. Use tepid water to all plants in a growing state, and as little as possible to everything, so as to avoid as much as can be the use of fire-heat. Spring flowers to be thought of now, so as to secure a proper succession of Cyclamen, Primula, Cineraria, and a few potted Pansies. The chief point in managing these things is to keep them as near the glass as possible. Give water very carefully, to guard against damp at the collar, and let them have as much air as possible consistent with their forwardness and the state of the weather. Those to be pushed on for a first supply keep in warm greenhouse temperature, and constantly look out for fly which will revel amongst them

if not checked in time. Succulent plants must now be arranged in their winter quarters. In a mixed collection the best place for them is a top shelf in the full light, and where they are not likely to suffer by drip. The requirements for their winter safety are a dry position, plenty of light, air when needful, and security from frost.

VINERY.—Vines grown in pots for forcing for early grapes may now be shifted into large pots, and the safest way to do it will be to shift pots and all, and without turning out the roots of the vines. Prepare the 12-inch pots with crocks and a few inches of compost; enlarge the drainage holes of the pots the vines are in, then place these pots inside the larger pots, and fill in with tough turfy compost; the outer pot will soon be full of roots, and the vines may be allowed to carry all the bunches they show, and when these are ripe the vines should be destroyed. Vines to rest from this time to be pruned at once; in fact, early pruning is the only safe method of preventing bleeding.

STOVE.—Forcing to be commenced now. Put in nothing but what has been prepared for the work, and has ripe wood and well-formed flower-buds. Azaleas, Camellias, Gardenias, Roses, hybrid Rhododendrons, double Plums and Peaches, double Cherry, Weigelias, Tree Pæonies, Chimonanthus fragrans, Rhododendron ciliatum, Cytissus Atleeana, Kalmias, Andromeda floribunda, Daphnes, and Jasminum nudiflorum, are all cheap and easy subjects to force, and all beautiful in their season. Orchids at rest to be kept moderately dry and ventilated. Endeavour to make them rest completely, as if they do not enjoy a season of complete repose, they will not bloom so satisfactorily next season. Those that do not naturally rest to have the warmest positions, but even these are not now to be encouraged to grow more than sufficient to keep them in health.

PITS AND FRAMES.—Auriculas, Carnations, Picotees, and Pansies in pots to have air frequently, to prevent mildew; slight frosts will not hurt them so much as a confined and damp air; take off the lights in the morning, and keep them off till the sun is nearly quitting the frames, then shut up, and there will be enough warmth retained to counteract the frost without. In damp, dull weather, tilt the lights only to admit a slight current of air through, and at every opportunity when the weather is genial take the lights off, clear away dead leaves, gently stir the surface of the soil in the pots, and give a little water if needed. Auriculas must be kept clean and dry; any drip from the frames will do incalculable mischief; at no time, not even during frost, should the roots be dust dry. Carnations will often be found beset with green-fly during damp warm weather at this time of year; in which case fumigate at once, and again a few days afterwards.

THE GARDEN GUIDE FOR DECEMBER.

KITCHEN GARDEN.—According as the weather and the state of the soil will permit, make plantations of rhubarb, seakale, asparagus, and horse-radish. Roots of dandelion, packed together in leaf-mould, and put into gentle heat, will furnish a delicate salad in five or six weeks. Seakale pots are best for covering the roots. Keep dung and all soluble matters under cover. Turn over manures, and put aside in heaps to be frozen, rotted leaves, and other material suitable for potting, and when well sweetened and pulverized, remove to bins in the potting-shed to keep dry for use. Get sticks and stakes tied up in bundles ready for use; wheel turf and weeds to the muck-pit; get pots washed and sorted over, and crocks shifted into sizes for the potting-bench.

FRUIT GARDEN.—In all planting operations let nothing lie in by the heels an hour longer than can be helped. Bush fruits properly taken up and properly planted ought not to miss the move in the slightest degree, but you are sure to lose a whole season if they lie about waiting to be planted. Root-prune any trees that grow too luxuriantly to bear well. Lay boards in a slope over vine borders, to shelter them from excessive cold rains. Unnail from the walls the younger shoots of tender wall-trees, to prevent premature breaking. Strawberry-beds may be made this month, but there is no certainty of a crop if left so late.

FLOWER GARDEN.—At this season of the year it is important to keep everything as tidy as possible. If any bulbs remain out of the ground, get them in without delay. Take up tea-roses, and lay them in by the heels in a shed out of reach of frost. Cut down fuchsias that are to remain out all the winter, and cover their roots with coal-ashes. Pansies, pinks, and other choice things in open beds, should have a little litter sprinkled over them in frosty weather, or be protected with canvas on hoops. Tulips protect in the same way. Keep auriculas and other plants in frames moderately dry, and free of dead leaves.

GREENHOUSE AND STOVE.—In the earliest vinery the vines will want frequent attention and a very regular heat. Ericas must have air at every opportunity, and if brought in with flowering shrubs to be forced, must be very gently stimulated, as they are impatient of heat. Soft-wooded plants must have fire-heat during foggy weather as well as during frost. Greenhouse 40° to 45°.

GREEN FLY ON ROSES.—*A. J. W.*—Dipping the shoots in tobacco-water, or in an infusion of quassia-chips, made by steeping 2 ozs. of the chips in a gallon of water, can be highly recommended. The water should be poured on the tobacco or quassia-chips when boiling hot, and then allowed to stand until it has become quite cold. A little size mixed with the water when hot will ensure its adhering to the foliage much better. Dusting the foliage with tobacco-powder will be found one of the best remedies. The foliage must be moist when the powder is applied, and it should be washed off in about twenty-four hours after its application. Thorough washings with the garden-engine will also materially assist in the removal of the pests.