

and hardiest, and may be entered on the select list of "beautiful trees for kind climates." Dr. Hooker says, in speaking of the tree daisies, "Many of them would thrive well and form great ornaments in the gardens in the mild part of the West of England," and adds, that "the present species forms a fine bush in the Scilly Isles." This tree daisy is a native of the east coast of Australia, from Port Jackson, the Blue Mountains, and Illawarra, southward to Twofold Bay. The plant is not known in English nurseries.

ON RAISING ROSES FROM SEED.



HERE is a good show of scarlet "heps" now on the wild roses, and the roses of the garden are not altogether destitute of similar adornments. It will be reasonable, therefore, to offer a few practical remarks on the raising of roses from seed.

It is generally believed by amateurs that to raise seedling roses is a most difficult and tedious business; but that is a mistake. There can be nothing easier. To obtain new and fine varieties worth naming is another matter, but it would be a grand mistake to suppose that elaborate manipulations in hybridizing, or as we should more properly say, crossing, are necessary. Very few of all the roses that are in the catalogues have been obtained by systematic crossing; they have for the most part been obtained in the same way as good geraniums, good carnations, good dahlias, and good chrysanthemums are obtained, by simply saving seed from the best varieties and carefully raising plants therefrom. It is, nevertheless, a fact that, as a rule, systematic raising gives the best results, and the rosarian may therefore be properly advised to operate on selected flowers with a view to obtain seed of a character predetermined by the operator. If he is not disposed to make so refined a pastime of raising seedlings, he may be content to save seed as he can get it, and take his chance of what it may produce.

Our climate is not quite favourable to the raising of new roses, and that is the principal reason why we have to depend upon the rose-growers of sunny France. Nevertheless, the many splendid varieties that have been raised by Messrs. Paul, by Mr. Ward, and others, not only prove the possibility, but afford abundant encouragement to the English amateur, who in a fine autumn may ensure abundance of good seed; and in a wet and cold autumn must be content to rest from his labours on getting perhaps a score of ripe heps instead of hundreds or thousands. How then is the seed to be obtained? The simplest mode of procedure will be to plant out in a sunny position, on rather poor soil, a selection of the very finest roses known. The site should be dry and breezy; if shut in by trees, or in any degree swampy, it will not produce good seed. A luxuriant growth is not to be desired, in fact a somewhat starving and roasting condition favour seed production, but the seed-producing plants should not be starved to the extent of impairing their

health; for above all things we want vigour in roses, and debilitated parents are not likely to produce robust progeny. Every inferior rose that can be got at within a mile of the seed ground should be grubbed up and burnt, and consequently the seed grower must purify his own garden of such, and that will be no hardship, for the best roses, anywhere and anyhow, must be better than the worst. In the first place the selection should comprise all the first-class typical roses; next all the most distinct and beautiful of the several classes. The collection should be comprehensive, save and except in this respect, that every variety known to have a weakly constitution, however highly esteemed for its flowers, should be carefully excluded. We have too many weak-habited varieties already, and the English raiser should as carefully as possible guard against adding to their number. In selecting for the plantation, any kind of roots will do, and it might be a saving of expense to take from a nursery all the ugly plants of the best kinds, because the shape and altitude are matters of no consequence at all, if the object is seed-saving merely.

It is an important matter to ensure that the seed is ripe before it is gathered, and on this point mistakes may easily be made. It happens with heps as with grapes, that they often acquire a fine colour in advance of perfect ripening, and, as a rule, a hep is not ripe when it is of a brilliant red colour, and if the harvesting of good seed is our object we must wait until the heps are black, or nearly so. It may be proper to remark here, that the seed-producing trees should have a little but not much care. Above all things they must be kept in good health, and any that show a persistent tendency to mildew should be rooted out and burnt. They will require no more pruning than suffices to keep them in order, for the more flowers they produce the better. The novice may reasonably suppose that better seed could be obtained from a few first-class flowers, than from allowing the flowers to come freely and to lose somewhat of their substance and doubleness. But the fact is just otherwise. By a somewhat starving system of cultivation, which results in rendering many first-class varieties "goggle-eyed," through deficiency of petals, we secure a fine sample of seed, from which, in all probability, there will result a fair proportion of seedlings characterised by excessive fulness, for the *doubling tendency is in the strain*, and will come out at last if encouraged by good cultivation.

The heps having been gathered may be treated in several different ways. The most simple is to stratify them in layers with sand in a damp place, and leave them until March, and then to rub out the seeds and sow in the open ground in rows two feet apart, the seeds being six inches apart in the row. Another simple mode of dealing with them is to sow the complete heps in rows as soon as gathered, without any attempt to separate the seeds from the pulp. This is Nature's way of raising seedling roses, and although it is a rough way, it has this advantage, that the seedling plants have their proper vigour, for the seed is buried as soon as it is ripe. The result of this method is that the seedlings rise in clusters, and therefore the heps should be put at least a foot apart, in rows two feet apart.

Another method of procedure is to break open the heps and

separate the seeds and sow in pans and boxes, and keep them in frames or pits, or under the stage of a greenhouse, all the winter. This is the *best* method, for it ensures early germination, without drying of the seed, and gives the cultivator command of the seedling plants from the first. In such a case we should prefer to pot all the earliest plants and flower them in a cool, airy greenhouse, and plant out all the late ones, and wait a little longer for their flowers. Now, the inexperienced amateur will want to know how long we must wait to see the flowers of the seedlings. Well, comparatively speaking, no time at all. If seedling roses start early, most of them will flower the first season, and the remainder will flower the second. We have flowered seedlings in pots in forty-five days from the date of sowing the seed, but as a rule they need five or six months growing before they flower, and those that flower latest are generally the best. Probably some of those that flower first deserve to be saved, for they present lovely little flowers, sometimes quite novel in colour, and as round as cherries, and not much larger. Some day a prophetic amateur will be wise enough to keep some of the best of the most precocious seedling roses, and by this conservative procedure provide us with a companion rose to the Lawrence or Fairy roses, which have been too much overshadowed by the thumpers and thunders of the exhibition table.

The raiser of seedlings must make much of promises. Whatever promises well must be kept and propagated. A seedling rose never declares itself as "first in the throng" by its first flower, or even by its first half-dozen. Remember that, all you aspirants for floral fame. You must have prophetic insight, or you will be continually consigning to the rubbish heap possible competitors with Marechal Niel, or Gloire de Dijon, or Baroness Rothschild, or Victor Verdier, or something else. Let us suppose now that you have flowers of promise. In the first place bring pencil and note-book, and give the plant a provisional name or number, and make an entry descriptive of both leafage and flower, and a very rough and hasty description will suffice. Next adopt whatever measures are most convenient for its multiplication. You may enter a few buds in brier or Manetti stocks, and you may also put a few cuttings or eyes in pans of sandy soil, over a gentle hot-bed, to ensure a few plants on their own roots. When the cool autumn days return you must separate the plant from the crowd, and give it a separate place on rich soil in an open situation, and it must be moderately pruned back to ensure bloom the next season from the ripest wood, and thus, giving it a good chance, you may hope for a reward of your labours. The second bloom will surpass the first, and not unseldom the third bloom will surpass the second; but in the third year your seedling will probably be at its best, and you may make up your mind whether it is best to keep it, sell it, or burn it. Be not troubled if after the careful trial of three years you have to burn many; but notwithstanding such a painful expectation, do the thing well, or do not dabble in seedlings at all. You must make stock of every promising plant, and you must courageously destroy all the evidently inferior ones, and of these you will have plenty. In the event of a

seedling turning up a trump, what an advantage it will be to have a ready made stock of it; and on the other hand, what a disadvantage will you be at if a seedling comes out grandly in the second or third year, and you find you have but one plant, the propagation on promise having had no attention.

It may be well to offer a few advices to amateurs who propose to "make assurance doubly sure" by careful manipulations of selected flowers. If you have the patience to examine the pedigrees of roses, of which, by the way, we have very few that are authentic, you will find that the pollen parent is the most important of the two. The old rule of going to a flower of high colour for pollen, and to one of good form for seed, has been considerably modified by recent experiments and observations. Look to your pollen parent first of all, and, generally speaking, think of *form*, *substance*, and *colour*, without reference to doubleness, because amongst the seedlings from varieties that are strong in form, and substance, and colour, a goodly proportion of thoroughly double flowers will come, for, as a matter of fact, doubleness is more easily obtained than any other quality. This is not orthodox teaching, but it is true. Hitherto writers have made it a point that seeds should be obtained as much as possible from double flowers. Our advice is that you starve the doubles into singles, looking for form, substance, and colour, without reference to doubleness, and trusting to your own power to *make petals* when you want them, provided you secure seedlings remarkable for perfection of form, distinctness or perhaps richness of colour, and the substance of a calf skin or piece of pile velvet, or the parchment of a big drum of the very best maker. Pray don't be in a hurry about doubleness, so long as you take seed from first-rate varieties, for the doubleness is in the blood, and will come out as time and food and sunshine contribute to the stamina of the plant. S. H.

WINTER FLOWERS FOR THE CONSERVATORY.

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O have a good display of flowers in the conservatory during the winter months is by no means an easy matter, and it requires some years of practice to discover the most suitable things for winter decoration unless advised by those who have had some experience in the matter. Knowing this I have thought a few observations upon the decoration of the conservatory in winter would be of considerable service to a large body of readers. In passing I would add that for many years past the character of our business has compelled us to devote special attention to winter flowers, and unusual facilities have consequently been enjoyed for arriving at correct conclusions respecting the merits of the most popular subjects adapted for winter decorations. I shall be as brief as the