

## RAISING HARDY PERENNIAL PLANTS FROM SEED.

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AS the most attractive hardy herbaceous plants are once more enjoying that degree of popularity they so well deserve, a few words of advice on raising a stock will, no doubt, prove useful to the amateur. Herbaceous plants, it may be stated, can be propagated in two ways, one by means of cuttings, and the other by means of seed. To propagate the majority by the first of the two ways with any degree of success requires a considerable amount of skill, and entails no little labour, and what is of equal importance, it is necessary to have the command of a stock of plants for furnishing the cuttings. Hence it will be seen that raising them from seed will be the best way for the amateur, more especially as the seed can be procured at a cheap rate. In a catalogue of flower-seeds before me, which is issued by Mr. Thompson, of Ipswich, seeds of about two thousand plants are offered, and the majority of these are hardy perennials, and nearly all the remainder are hardy annuals. Thus it will be seen that there is no difficulty whatever in obtaining the seed, and for the comfort of those whose desires exceed the length of their purses, it may be mentioned that the price of the packets of seed average threepence each.

The month of March is usually considered the proper time for sowing flower-seeds of all kinds, and in consequence those who have not had the command of a hotbed, or some other source of artificial heat for starting the seeds, have considered it useless to sow them. Now, it cannot be too well known that hardy herbaceous plants can be raised most readily from seed during the summer season. Indeed, the summer is the proper time for the work, as the plants are then more robust, and altogether better than those raised in heat, and when they once become established, they make most rapid progress. In some few cases a stock of flowering-plants may be had in less time when the seed is sown in artificial heat, but unless under exceptional circumstances, the seed should be raised without its aid.

In raising considerable quantities of plants of the class here alluded to, the majority may be sown in the open border, but it is advisable to sow very small seeds in pans or pots, and place them in a cold frame. In sowing the seeds out of doors, make the soil rather fine by well chopping the surface with the hoe, and then remove the rough pieces and the stones with the rake. Then draw the drills about an inch in depth, and about nine inches apart. They should be rather broad at the bottom, as it will give the young plants more room than they otherwise would have, and render it unnecessary to transplant them at so early a stage, to prevent overcrowding. Previous to sowing the seeds in dry weather, it is a most excellent plan to fill the drills with water, and allow it to soak

away. When this is done, the seed will commence to germinate at once, whereas, if sown in dry soil, it will lay until the rains have moistened it sufficiently. This is a more important matter than may appear at first sight, as it will make all the difference between having, at the commencement of the winter, a lot of small seedlings or a stock of large plants of sufficient strength to produce a grand display of flowers the following season.

If the soil is heavy and not in very good working order, a barrowful of light sandy stuff, such as the refuse of the potting-bench



GLOXINIA-FLOWERED LONG-GLOVE.

will be of great value for covering the seed with. In sowing in pots, pans, or shallow boxes it is simply necessary to place a few crocks in the bottom and then fill with light sandy soil and make the surface level. A covering of fine soil will then be required, and the pots can be placed in a cold frame, or on the shady side of a wall or hedge. The pots will, of course, require occasional attention for the purpose of keeping the soil in a moderately moist condition.

There is yet another way of sowing the seed, but it can only be recommended in the case of the strong growing subjects, such as the

foxglove, and that is to sow the seed where the plants are to remain. Where there are nooks and corners in a semi-wild state they may have additional beauty and interest given to them by the introduction of flowering plants of free growth and noble aspect. Indeed, a few dwarf-growing plants may also be most advantageously introduced for carpeting the surface. As a rule, it will be simply necessary to scatter the seed over the surface and then hoe over the ground for the purpose of covering it. The seed will germinate more quickly if the ground is moist, but it is not necessary to wait for a rainy day, as the seed will not take any harm by laying in the ground for a few days before it commences to germinate.

In the preceding paragraph, reference has been made to the foxglove as being the type of the plants best suited for semi-wild places, and certainly it is admirably suited for such situations. When in groups, with noble spikes of flowers ranging from four to six feet in height, it has a most striking and beautiful appearance. It is also well adapted for planting in groups, of about half a dozen plants, amongst the shrubs with which plantations in the pleasure-grounds are generally faced. There are a number of varieties, all of which are thoroughly good; the best are known as the Gloxinia-flowered foxglove, or *Digitalis purpurea Gloxinioides*, which produce flowers of large size, good shape, and are beautifully spotted. To prepare the plants for their permanent quarters, it is necessary to transplant them to a nursery-bed, for if they are planted out when in a small state the chances are that they will be either dried up or eaten by slugs. But by planting them in a nicely-prepared bed, where they can remain for six weeks or two months, they can be watered and shaded when they require that assistance. About three inches is a capital distance to put them apart in the nursery-bed. Some plants will not require transplanting provided the seed is sown thin.

The time for planting in the permanent quarters must depend upon circumstances. If the plants are strong they may be put out towards the end of September or in the early part of October, but otherwise it will be better to defer the work until March or April. Much, of course, depends upon the character of the plants, and the state of the weather and soil at the above-mentioned seasons. But as a rule it is of little use to put out small plants late in the season, for they seldom make so satisfactory a start as when kept in the nursery-bed and planted in spring.

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PARASITIC FUNGI. — Under the name of "Herbarium Mycologicum Economicum," F. Baron Thümen proposes to form a collection of those parasitic fungi which are injurious (including also any that are useful), in forestry, agriculture, horticulture, or in any other branch of industry. The specimens of each species will be labelled with the scientific name, diagnosis, and any needful remarks, and, where possible, will be sufficiently numerous for a portion to be submitted to microscopic examination. The collection will be issued in fasciculi of fifty species, at the price of three thalers each, and may be obtained of the collector, at Teplitz, in Bohemia.

July.