FLORICULTURE, COMPRISING THE GENERAL MANAGEMENT AND PROPAGATION OF STOVE, GREEN-HOUSE, AND HARDY HERBACEOUS PLANTS, HARDY TREES AND SHRUBS

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Floriculture, comprising the general management and propagation of stove, green-house, and hardy herbaceous plants, hardy trees and shrubs by Mr. Joshua Mantell

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OF

STOVE, GREEN-HOUSE, AND HARDY HERBACEOUS

PLANTS,

HARDY TREES, AND SHRUBS.

BY

MR. JOSHUA MANTELL, SURGEON.

'I have made a nosegay of culled flowers, and brought nothing of my own but the thread which ties them.'—MONTESQUIEU.

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The following pages were contributed by the writer to the second edition of 'Baxter's Library of Agricultural and Horticultural Knowledge.' The publisher having shown the MS. to some of his horticultural friends, has been urged by them to publish it in a separate form, from their conviction of its practical utility. The difficulty of obtaining useful information from modern publications on Floriculture is often experienced. The diffuse manner in which the subject is usually treated, deters many from a pursuit so interesting in itself, and so well calculated to cherish the best feelings of our nature. Any compendious treatise, therefore, on the cultivation of Flowers, merits attention. How far the writer has succeeded in discovering a plan to facilitate the progress of this art, must be left to the decision of the experienced cultivator: all that need be here said in commendation is, that the facts and directions are the results of experience, or have been gleaned from the best authorities.

The construction of the Tables, as regards the arrangement, is entirely new, and the reference to the modes of culture and propagation so complete, that their value cannot fail to be appreciated. The scientific name of every plant has been carefully accented, and its derivation designated by Italic letters. The acute accent (′) denotes such vowels as are sounded short, as Campánula; and the grave (‵) is placed over those sounded long, as Linària. The systematic names are distinguished as classical, *i. e.* names applied to them by the ancients, by the first letter being in Italic, as *D*áphne; as commemorative, by the terminating letter or letters being in Italic, as Dicksòn*ia*; and as aboriginal, or of uncertain derivation, by the whole word being in Italic, as *Catálpa*. The other names are formed in almost every case from the Greek, but sometimes from the Greek and Latin.

The Tables have also been published in the form of a Chart, for the convenience of gardeners, and those engaged in the propagation of Plants and Shrubs.

FLORICULTURE.

THE beautiful lustre and gaudy tints which adorn the vegetable creation have always rendered the cultivation of flowers an object of attraction and emulation among all classes of society: and surely this is a wise ordination—for, whilst man is engaged in such rational pursuits, the asperities of his nature are softened and subdued, and his mind is rendered susceptible of the tenderest emotions, the most delightful associations; for who can pass even the poor man's cot, where the hand of industry has tastefully entwined the rose, the honey-suckle, and the briar, around the very threshold of his home, without associating in his mind the idea of comfort and of happiness within? whilst, on the other hand, if the weeds of indolence are seen towering in luxuriant growth over the loveliest gems of Flora's Temple, choaking up, as it were, the very approaches of his habitation, he concludes with emotions of regret, that waste and prodigality are the inmates there. How important is it then to induce a taste for the cultivation of flowers! and hence, in the promotion of this desirable object, we would not deprive even the humble cottager of a participation in this delightful occupation—for, unless a man has attachments that endear him to his home, his leisure hours will be too frequently spent in revelry abroad, whilst his family is suffering from want and penury. But it may be urged that his leisure hours might be more profitably employed in providing for the future wants of his family—it may be so—but long observation convinces us that a love of flowers engenders a love of industry—that the former is incompatible with idleness, and that both will rarely be found associated in the same individual.

In concluding these introductory remarks, we would remind our readers that, as Nature, in the vastness of her profusion, has made the flowers of the field the common property of all, so the wants, the enjoyments, the happiness of all equally constitute an integral part in the wise ministrations of a kind and bountiful Providence.

The cultivation of flowers embraces so wide and extensive a field of inquiry as almost to preclude the possibility of imparting much useful information within the compass of a few pages; still we hope, by means of original tables, to effect more than has been hitherto accomplished in a similar space.

The culture, propagation, and general management of plants will be most conveniently treated of under the following heads:—

1. Stove plants.
2. Green-house plants.
3. Hardy trees and shrubs.
4. Hardy herbaceous plants.
5. Annuals and biennials.

1. *Stove plants.*—Tropical plants, among which are included many of our most interesting and beautiful exotics, require, for their successful cultivation in this country, an artificial atmosphere with an elevation of temperature ranging between 60 and 70 degrees of Fahrenheit's thermometer. In hot-houses of modern construction, the temperature is raised by the circulation of hot water through metallic pipes, so distributed throughout the apartment as to produce a more uniform radiation of heat than can possibly be accomplished by common flues in the ordinary manner, and thus the necessity of bark beds and bottom heat is entirely superseded.

In the general management of stove plants the continuance of the species by timely propagation is indispensably necessary; a judicious admission of air and a regular supply of water are no less important. Air should always be admitted as soon as possible in the morning during fine weather, and the house closed early in the afternoon, that the plants be not chilled by the admission of night air, which is always prejudicial to the growth of the plants.

Stove plants may be raised from seed which are usually sown in the spring, on a moderate hot bed, but as seedling plants are seldom so hardy as those propagated from cuttings, the latter is almost always preferred. Cuttings taken from plants with ligneous stems, root best in fine sand, and there is also less danger of injuring their roots when they are potted off, than if planted in mould. Many herbaceous plants will not succeed in sand, and then a compost or rich garden mould must be had recourse to. Cuttings may be made from December to April, as they strike root with greater facility within this period than when the season is much further advanced. Cuttings are prepared from appropriate shoots by making a transverse incision immediately below a joint or the insertion of a leaf. The leaves are cut off as close as possible from that part of the stem which is to be inserted into the ground, but on no account should a leaf be shortened or removed from the upper portion of the cutting—success or failure often depends upon the degree of attention paid to this circumstance. Cuttings strike root most readily when not inserted too deep, indeed they can scarcely be planted too shallow, provided they are well fastened in the sand or mould; they require to be kept moist, and the glasses with which they are covered should be occasionally wiped, as an excess of moisture will make them turn mouldy and even rot off, although they may have previously taken root. The young plants should be transplanted into small-sized pots as soon as they have struck root, which require to be carefully drained with broken potsherds or rough pieces of turf; they must then be removed to the hot-bed, or put under glasses and shaded from the sun until they have taken fresh root, when they may be gradually exposed to the light. In case they should have been drawn up weakly, the slender tops may be pinched off, which will cause them to throw out new and vigorous shoots, producing much better and handsomer plants. During their future growth, none but decayed leaves should ever be taken off, for the removal of a large leaf from a young plant will generally destroy it; a fact not so well known as its importance demands. Such plants, as cannot be propagated by cuttings or layers, should be budded or inarched on the nearest allied species, and the practice will generally be found successful.

The entire collection should undergo a thorough examination in the spring, when many plants will require shifting into larger pots, and some require to be again removed in the autumn; indeed strong free-growing plants can scarcely be repotted too often, as they thrive and flower much better in large-sized pots.

Hot-house plants are very liable to be infested with aphides; these may be effectually destroyed by the smoke of tobacco. To remove spiders and ants, which are often very destructive, it will be expedient to wash the walls and beams with a weak solution of corrosive sublimate, two ounces to a gallon of water, and the readiest and safest way of applying it, is with a whitewash or paint brush. If there be any objection to the use of the corrosive sublimate, then one pound of sulphur vivum may be mixed with quick lime in a common pail, and when applied as above will be found equally effective. The mealy bug and scaly insect should be brushed off the plants as soon as they make their appearance. The whole collection should be frequently sprinkled over during hot weather with water by means of an engine, and the temperature increased by closing up the house immediately afterwards: by these means the whole will assume a fresh and lively appearance, as indicated by the thriving and healthy condition of the plants.

2. *Green-house plants.*—The temperature of the green-house usually ranges between 40 and 60 degrees of Fahrenheit's thermometer. No fire is required except in damp weather, or to protect the plants from the effects of frost; the healthy condition of the plants can be only maintained by a fresh admission of air at all times when the weather will permit. Watering, clearing from dead leaves and insects, stopping over luxuriant shoots, and perfect cleanliness, is all the attention required during the winter months. None of the plants, however, should be watered until they are perfectly dry. From nine to twelve in the morning is the most proper time for watering at this season of the year. As the spring advances, fresh air should be daily admitted from morning till night, and in mild, warm weather a little may be admitted during the night, which should be gradually increased, that the plants may be prepared for removal into the open air by the middle or latter end of May. It is safest to remove them in calm cloudy weather, and a sheltered situation should be selected for their reception. The process of shifting the plants usually commences about this period; but young tender plants should be repotted whilst they are still in the green-house, that they may make fresh roots before they are finally put out into the open air.

In preparing soil for the plants, both turf and mould should be blended together, but on no account sifted, as it materially injures the growth of the plant. Soil fresh collected should always be preferred, and the closer it is obtained from the surface the more congenial it will prove to the future growth of the plant. The plants must be regularly watered during the summer, as late as possible in the afternoon, and about the middle of September the entire collection should be replaced in the green-house.

Green-house plants are raised from seed, and are also readily propagated by cuttings and layers in the same manner as directed for stove plants. Cuttings may be made from Christmas to May, but some require to be taken at different periods of the year. Reference may be made to the following tables, which will be found to embrace every requisite information, the genera being arranged in the order adopted by Mr. Sweet in his valuable and practical work, 'The Hot-House and Green-House Manual.'

3. *Hardy Trees and Shrubs.*—The tables contain all that is necessary to be noticed here in reference to the propagation of hardy trees and shrubs.

4. *Hardy Herbaceous Plants.*—These will be best considered in connexion with our remarks on the flower-garden.

5. *Annuals and Biennials.*—Stove and green-house annuals and biennials may be raised from seed in a hot-bed frame. They are usually sown in pots containing one-third part of well decomposed vegetable or animal manure, and two-thirds of light rich loam. The young plants are potted off singly when sufficiently grown, and placed in an appropriate situation in the stove or green house.

Tender or half hardy annuals may be raised from seed on a gentle hot-bed without a frame, being protected by matting supported by a few hoops or bent sticks. Most biennials and many annuals may be raised from cuttings, and, if prevented from ripening their seeds, may thus be preserved several years.

Tender annuals are usually sown from the latter end of February until the middle of May. Hardy annuals should be sown in succession during the summer months, and they will in mild seasons continue to flower till Christmas.

It will be necessary to add to the preceding observations a few remarks on the use and construction of the following Tables. The working gardener has long felt the want of some compendious means by which he might be enabled to acquire a knowledge of the essential practices of his art. If there be any merit in the construction of these Tables, it consists in the discovery of a method by which these objects may be accomplished with but little mental exertion, and without the sacrifice of valuable time. They will be found to contain, within the compass of a few pages, the culture and propagation of nearly four thousand genera of plants; and as the species require the same treatment as the genus to which they belong, these tables will embrace the cultivation of between twenty and thirty thousand of the most interesting productions of the vegetable kingdom.

The list of the natural and artificial soils adapted for the successful cultivation of every plant given in the Tables, is *numerically*, and that of the modes of propagation *alphabetically* arranged: thus, should the culture of any species of plant be required, it will only be necessary to turn to the genus to which it belongs. For illustration: let Abròma, under stove plants, be taken as an example: opposite to this we find, 1. 6. E. By referring to the modes of propagation, we learn that our plant may be raised,—1. by seed,—6. by cuttings of the young wood planted in sand under a bell-glass, and placed in a shady part of the stove or green-house, and that the cuttings are liable to damp off unless the accumulated moisture be occasionally wiped from the glass. Under soils, it will be seen that—E. indicates equal parts of loam and peat, as best adapted to the growth of that genus. If one example more be required, let Œnothèra, under Green-house plants, be taken: here the numbers 1. 2. 17. point out the modes of propagation. 1. By seed. 2. By division of the root, and 17. By cuttings planted under a hand-glass—A—that a light rich soil is required. Annuals and biennials being uniformly propagated by seed, it has been deemed necessary to point out only their habits; these are designated by the following abbreviations:—A. Annual. B. Biennial. H. Hardy. T. Tender. G. Green-house. S. Stove. Where this—*—character occurs, it denotes that some of the species of the genus are also Hardy. One example will render these Abbreviations perfectly intelligible. The habits of the Verbèna are expressed in the Table by the letters *G, A, B. which show that it is a Green-house Annual and Biennial, and also, by the *asterisk*, that some of the species are Hardy.