M'Mahon's Calendar: The Pleasure, or Flower-Garden

IN 1806, BERNARD M'MAHON, AN IRISH-BORN NURSERYMAN living in Philadelphia, published The American Gardener's Calendar, the first comprehensive gardening manual published in the United States. It was widely used by gardeners throughout the United States, including Thomas Jefferson, reaching its eleventh edition in 1857. M'Mahon organized his manual by months, separating most month's instructions into these recurrent subsections: Kitchen Garden, Fruit Garden, Orchard, Vineyard, Nursery, Pleasure or Flower-Garden, Green-House, and Hot-House. The Calendar's Flower-Garden sections tend to focus on plants found in English gardens (e.g., tulips, buttercups, anemones, auriculas, polyanthuses, carnations, pinks, tuberoses, amaryllis, wall-flowers, gilly flowers, garden-rockets, hyacinths), and it's likely that many of his passages were kidnaped from English or European sources. But it's evident on such topics as propagation and soil enhancement (essential information for a 19thcentury nurseryman) that M'Mahon had an extensive, first-hand knowledge of topics included in this impressive compendium. Although many recommendations are intended for gardens with large staffs (or a slave workforce, such as the situation at Jefferson's Monticello), the Calendar frequently describes practices immediately applicable to a lone gardener. Since M'Mahon was writing before the arrival of chemical herbicides and pesticides, his book serves by default as a potentially useful manual for those of us committed to organic gardening.

One significant attraction of M'Mahon's prose is that his writing is consistently efficient, practical, and accessible. His sentences do occasionally become convoluted, and he uses a few words and phrases that may not be immediately understood (e.g., the word "blow" to signify a flower in bloom), but his *Calendar* is full of passages that felt directly relevant to my own gardening practices. One does need to be aware that M'Mahon did his gardening in a Zone 7 climate, so his "growing season" would have stretched from early April to late October, about two months longer than the case for Zone 5 Iowa gardens.

What follows is a series of quoted passages from his monthly "Pleasure or Flower-Garden." While I have retained McMahon's spelling and exuberant use of commas, I have on occasion added a few personal comments and provided names for plants no longer commonly identified by M'Mahon's terminology. ~Bob

The Pleasure, or Flower-Garden

January

• In designs for a Pleasure-ground, according to modern gardening; consulting rural disposition, in imitation of nature; all too formal works being almost abolished, such as long straight walks, regular intersections, square grass-plats, corresponding parterres, quadrangular and angular spaces, and other uniformities, as in ancient designs; instead of which, are now adopted, rural open spaces of grass-ground, of varied forms and dimensions, and winding walks, all bounded with plantations of trees, shrubs, and flowers, in various clumps; other compartments are exhibited in a variety of imitation rural forms; such as curves, projections, openings, and closings, in imitation of a natural assemblage; having all the various plantations and borders, open to the walks and lawns. . . . all the parts of the pleasure-ground being so arranged, as gradually to discover new scenes, each furnishing fresh variety, both in the form of the

design in different parts, as well as in the disposition of the various trees, shrubs, and flowers, and other ornaments and diversities. . . . and even if the figure of the ground is irregular, and the surface has many inequalities, the whole may be improved without any great trouble of squaring or levelling, for by humouring the natural form, you may cause even the very irregularities and natural deformities, to carry along with them an air of diversity and novelty, which fail not to please and entertain most observers. (55-6) [It's evident that M'Mahon is a disciple of the landscape practices introduced in England in the second half of the 18th century by such figures as Capability Brown and Humphrey Repton. Coe's Alumni House Garden was designed in allegiance to an earlier tradition committed to a more classical, symmetrical walled flower garden intimately attached to a manor house. The next three passages reflect the lingering influence on M'Mahon of those older design values.]

- Gravel-walks should lead all round the pleasure-ground, and into the principal internal divisions, so as to have dry and firm walking, at all times of the year; for frequently, but particularly in winter, and in wet weather, grass-walks are very uncomfortable and even unhealthy to walk on. These walks should be of proportional width, in different parts, and larger or smaller in proportion to the extent of the ground. (59)
- Sometimes similar to the ancient designs, a spacious gravel walk is extended in a perpendicular line immediately from the front of the house, dividing the lawn, or extended on both boundaries and in other directions, with a wide border on each side, either straight or sometimes a little serpentined, and planted with the most curious low flowering shrubs, ever-greens, and herbaceous flowering plants. All these gravel-walks should be laid with the best gravel, six or eight inches deep, at least; but if more the better. (60) [I wish Coe's gravel walkways had gravel of that depth; it would dramatically reduce the number of hours we spend digging up the weeds and grass that view Coe's thin layer of gravel as an ideal nursery for seed germination.]
- All the plantation compartments of shrubbery, wilderness, &c. should be planted with some considerable variety of different sorts of trees, shrubs, and flowers, artfully disposed in varied arrangements; the tallest behind, the lowest forward, and the different sorts so intermixed, as to display a beautiful diversity of foliage and flowers, disposing the more curious kinds contiguous to the principal walks and lawns. (62)
- Some kinds of ornaments . . . being very expensive, are rather sparingly introduced; sometimes a temple is presented at the termination of a grand walk or opening, or sometimes a temple, banqueting-house, or bower is erected in the centre of some spacious opening or grass-ground in the internal division; other parts present alcoves, bowers, grottos, rural-seats, &c. at the termination of different walks; and rural seats are placed in different parts, by the sides of long walks, under the shade of trees, &c. for places of rest. (64)
- All the principal grass-walks, and lawns, within the limits of the pleasure ground, especially such parts as are intended for walking on, should also be kept perfectly neat by frequent mowing in summer, to keep the grass short, close and fine; give also occasional rolling, both to clean up the scattered worm-

casts, and to render the surface smooth and firm. Always make choice of a dewy morning, or moist weather, for the work of mowing; as the short grass will cut much better then, than when dry: be careful to have each mowing, performed with an even hand, not to score, or leave the mark of the sythe at each stroke, which has a most disagreeable appearance, and directly after, rake up the swarths of grass, into heaps and carry them away. . . . Likewise keep all grass-ground clear from litter, such as fallen leaves of trees, &c. which may be expeditiously affected by a light broom or besom on a long handle. (70)

• Particular care must be taken of the flower borders, &c.; they must be neatly and carefully dug in autumn, and pointed and dressed afresh in spring; and according as the various plants grow up, let such as need support have sticks placed to preserve them upright; and as the herbaceous perennials and annuals have done flowering and their stalks dreary, cut them down close, clearing off all decayed leaves and other rubbish.

All kinds of hedge-work and detached rained figures of evergreens should be clipped twice a year...that is to say, in June and in September; for without this, they will not have that neat handsome appearance, that inspires admiration and does credit to the person under whose care they are. (71)

• Here I cannot avoid remarking, that many flower-gardens, &c. are almost destitute of bloom, during a great part of the season; which could be easily avoided, and a blaze of flowers kept up, both in this department, and in the borders of the pleasure-ground, from March to November, by introducing from our woods and fields, the various beautiful ornaments with which nature has so profusely decorated them. Is it because they are indigenous, that we should reject them? Ought we not rather to cultivate and improve them? What can be more beautiful than our Lobelias, Orchis', Asclepias' and Asters; Dracocephaluma, Gerardias, Monards and Ipomeas; Liliums, Podalyrias, Rhexias, Solidagos and Hibiscus, Phlox's, Gentianas, Spigelias, Chironias and Sisyrinchiums, Cassias, Ophrys', Coreopsis' and Cypripediums; Fumarias, Violas, Rudbeckias and Liatria'; without charming Limadorum, fragrant Arethusa and a thousand other lovely plants, which if introduced, would grace our plantations and delight our senses?

In Europe plants are not rejected because they are indigenous, on the contrary they are cultivated with due care; and yet here, we cultivate many foreign trifles, and neglect the profusion of beauties so bountifully bestowed upon us by the hand of nature. (72) [In the Alumni House Garden, over half of the native plants listed by M'Mahon play a prominent role in the flower beds, including Asclepias (milkweed), Asters, Coreopsis, Gentians, Hibiscus, Liliums, Lobelias, Monardia (bee balm), Phloxes, Rudbeckias, Solidagos (goldenrod), and Sisyrinchiums.]

• Old decayed fine tan is a good article to cover hyacinths, tulips, and other bulbs with; it may be laid on, one inch or one inch and half deep, immediately previous to the commencement of the severe winter frost, and need not be removed, as it will keep down the weeds in spring, and protect the roots from intense heat and drought, during the period of their ripening. (73)

• When you desire a considerable increase of crocus's, or snowdrops, take up the roots but once in two years; if you let them remain longer, though the increase will be numerous, the roots become very small and produce but poor flowers. (75)

February

• About the latter end of this month, if the weather is mild and dry, you may sow many sorts of hardy annual flower seeds in borders, and other parts of the pleasure-garden.

The sorts proper to sow at this time are larkspur and flos Adonis, scarlet pea, sweet-scented and Tangier peas, candy-tuft, dwarf lychnis, Venus' looking-glass, Lobel's catchfly, Venus' navelwort, dwarf poppy, Nigella, annual sun-flower, oriental mallow, lavaters, and hawk-weed, with many other sorts.

Some of these, if sown now, particularly the larkspur, flos Adonis, sweet and Tangier peas, will flower much better, than if sown at a later period.

All the above seeds must be sown in the places where you intend the plants to flower, in beds, borders, pots, &c. They must not be transplanted, for these sorts will not succeed so well by that practice. (151)

• Towards the end of the month, if the weather be mild and open, and the ground dry, you may plant, when wanted, most sorts of hardy fibrous-rooted flowering plants, both of perennials and biennials, such as Lobelia's, Phlox's, Dracocephalum's [dragonheads], polyanthus's, primroses, London-pride, violets, double chamomile, thrift, gentianella, hepaticas, and saxifrage.

Plant also rose-campion, rockets, catch-fly, scarlet-lychnis, double feverfew, carnations, pinks, sweet-williams, columbines, Canterbury-bells, monk's hood, Greek valarian, tree primrose, fox-glove, golden rods, perennial asters, perennial sun-flowers, hollyhocks, French honeysuckles, and many others." (151)

• When the weather permits, let the flower beds and borders, in general, be thoroughly cleared from weeds, and from every kind of litter; for neatness in those parts of the garden is agreeable at all times, but more particularly at this season.

Therefore, let the surface of the beds and borders be lightly and carefully loosened with a hoe, in a dry day, and let them be neatly raked; which will given air of liveliness to the surface, and the whole will appear neat and very pleasing to the eye, and well worth the labour." (157)

March

• The proper compost for those flowers [i.e., carnations], is as follows, viz.

One half fresh, sound, loamy earth, taken from the surface of a rich pasture ground, turf and all, and not more than four or five inches deep.

One third, or a little more, of old horse-dung, such as had been a year previously used for hot-beds. One sixth coarse sea, or river sand.

These ingredients ought to have been mixed together in autumn, laid in a heap about two feet thick, in an open exposure, and turned three or four times during winter; so as that all the parts may be well incorporated and have the benefit of the frosts: early in March it should be gathered into a round conical

heap, to drain and become dry, and when sufficiently so, and wanted for us, pass it through a coarse screen or sieve, to reduce its parts, and take out stones, or any other extraneous substance which it contains.

The pots made use of for spring potting, should be ten inches wide at the top, five inches at the bottom, and eight inches deep in the side, with a hole in the centre of the bottom, an inch in diameter.

The pots are first to be near half filled with compost, previously placing an oyster-shell or such like, with its hollow side downwards, over the hole in the bottom of each: the compost is to be higher at the sides than at the centre of the pots, and the plants intended for them, which are supposed to have been wintered in small pots, containing three plants each, are to be carefully turned out with the earth adhering to them in a ball; and after rubbing off half an inch of the surface of the old mould round the plants, above their fibres, cleaning them and cutting of the points of their decayed leaves, the ball is to be carefully placed in the centre of the pot, and the space between it and the sides filled up with the prepared compost. . . .

This being done, give the plants a little water, and observe that the earth comes no higher up their stems than it did in the former pots, nor should the compost come nearer than within an inch of the top of the rim, after it has been gently shaken or struck against the ground in finishing. . . (287-8)

• If any tender annuals were sown last month, such as cochscombs, tricolors, Ipomeas, sensitive plants, ice plants, balsams, &c. in order to have them in perfection at an earlier period than common, make a new hot-bed towards the middle or latter end of this, in which to pick them, to forward their growth. Let the hot-bed be about thirty inches high, and make the top even; then set on the frame; and when the great heat is over, let the earth be put in; let it be light, rich, and perfectly dry, and lay it equally over the bed six inches thick; when warm, prick the plants therein at three or four inches distance each way, or some may also be pricked in small pots, one good plant in each, and plunged in the earth of the bed; giving the whole a little sprinkling of water; then let the glasses be put on, observing to raise them behind a little every day, to admit air and let out the steam; shade the plants from the sun till they have taken fresh root.

When they are rooted and begin to push, they should have fresh air every day; therefore let the upper ends of the glasses be raised an inch, two, or three in height, to admit it; but shut them down towards the evening, and cover them every night with mats; remember to sprinkle them with water occasionally, giving but a little at each time. (290) [I have no intention to create a dung-driven hot-bed, but I find it fascinating to read how gardeners used this heating/propagation system for gardening during the winter months.]

April

- Tulips never require to be artificially watered, in the hottest and driest seasons, at any period from planting to taking up the roots; nevertheless, moderate rains will be very beneficial to them in spring, and cause them to produce a strong bloom: after flowering, too much wet is very prejudicial ro the roots. Immediately after the flowers are on the decline, the bed must be fully exposed to the open air. (334)
- The compost proper for Auriculas, should consist of the following ingredients, in the annexed proportions, viz.

One half, rotten cow-dung, two years old.

One sixth, fresh sound earth, of an open texture.

One eighth, earth of rotten leaves.

One twelfth, coarse sea or river sand.

One twelfth, moory earth. ["Moory" would be soft, dark, peaty soil one might find in a moor or marshland.] One twenty-fourth, ashes of burned vegetables.

These ingredients should be well incorporated, and placed in an open situation, perfectly exposed to the action of the sun and air; it should be laid in a regular heap or mass from fifteen to eighteen inches thick and turned frequently: in this state it should remain a year or six months, turning it once every two months, and keeping it always free from weeds: before it is used, it should be passed through a coarse screen, to free it from stones, &c. and to incorporate it the more effectually. [The garden on our Kansas farm was next to the pen where the milk cows were held twice a day for milking; every winter my dad would scoop a year's supply of cow dung onto the garden, creating a soil dramatically more productive than the thin, rocky soil that constituted the surrounding pastureland.]

- All the varieties of annual flower-seeds that are capable of bearing the open air and of arriving at perfection in our climates, may now be sown with good success. In the early part of the month, you may sow the following kinds, with many others, too tedious to mention in this place, viz. Alkekeugi [Chinese lantern], China Asters, in sorts, Moldavian-baum, Belvidere or Summer Cypress, Candy-tuft in sorts, Lobel's-Catchfly, Cyanus, in sorts, Flos-Adonis [Pheasant's Eye], Bladder Ketmia, Heart's-ease, Convolvulus tricolor, Larkspurs, in sorts, Lavatera, in sorts, and Lupins of every kind; Dwarf Lychnis, Curled, Oriental, and Peruvian Mallows, Nigella's, Roman Nettle, Sweet, Tangier, and Winged Peas, Annual and Ten-week Stocks, Strawberry Spinach, Persicaria, Sunflower, and Venus's Looking-glass. . . Venus's Navelwort, Purple, and Yellow Hawkweed; Cassia Chamxchrista, Polygala sanguinea, and Silene, in sorts, &t. &c. About the middle of the month you may sow, Sweet Alyson, Love lies bleeding, Price's Feather, Mignonette, Tree, and Spike Amaranthus; Cock's-comb's, Cape Marigold, Bastard Saffron, and Honey-wort; Sweet Sultan, China-Hollyhock, and China Pinks; Marvel of Perus . . . Palma Christi, Annual Snapdragon, Zennia and Xeranthemum, &C. And in the last ten days of the month, you may sow either of the proceeding, and also the following kinds, viz. White, purple, and striped Globe Amaranthus, Tricolor Amananthus, Double Balsams and Martynia annua; Browallia, Scarlet Ipomea, Capsicums in sorts, Serpent Cucumber, and Squirting Cucumber; White and Purple Egg-plant; Cleome, purple, white, and dwarf Dolichos, with many other kinds (343-4) [Interesting to think of egg-plants as candidates for a flower garden; they are, indeed, handsome-looking plants with attractive flowers and fruit.]
- Here again, would I call attention, to the necessity of introducing into our gardens and pleasure grounds, a variety of our beautiful field flowers; and not to suffer those departments to appear desolated, in the autumnal months, whilst nature displays a profusion of its glory in the fields, woods, meadows and swamps; but in doing this, let it be observed, to give each kind, a soil and situation as nearly similar to that in which it grew in its wild state, as the nature and extent of your ground will admit. (346)

May

- Spring crocuses, snow-drops, fritillaries, crown-imperials, dens canises [dog's tooth violet], and all other early flowering bulbs that have done flowering, should, where intended, be taken up, as soon as their leaves decay. This ought to be constantly practised, with such as have stood unremoved two or three years; in order to separate the offsets, and to select the best roots for new planting; for without this care the bulbs would become numerous, and so small as to render the flowers very insignificant. The offsets when separated, may be immediately planted in beds or prepared borders, to encrease the stock and enlarge their size; or they may be kept up, as well as the largest of the roots, till found convenient to plant them. (337)
- The grass-walks and lawns, should now be duly mowed and rolled; otherwise, the grass will soon grow rank and unsightly; and where plantain or any other kind of weeds, are mixed therewith, they ought to be picked or grubbed out, or else, many of their seeds will ripen, and thereby increase their species, which will overpower the grass and render the verdure less agreeable.

The gravel walks should also be kept in complete order, preserving them always free from weeds, and having them occasionally swept to clear away all loose litter; and likewise well rolled, generally once a week, but particularly after heavy showers of rain, which will consolidate them, and render the surface smooth and even. (391) [In any given year we spend many more hours removing weeds and grass from the gravel walkways than are spent weeding the perennial flower beds.]

June

• The flower-borders, beds, shrubbery-clumps and other ornamental compartments, must now be kept remarkably clean and neat; and no weeds suffered to appear, or at least to grow to any considerable size, in any of those places. The weeds must be exterminated immediately on their appearance, either by hoe or hand, occasionally, and this should be performed in a dry day; if with the hoe cutting them up within the ground, and raking them off immediately. (417)

July

• Continue to propagate your choice carnations and pinks, by layers and pipings . . . for the performance of which, the early part of this month is a very principal time. Give the necessary shade and water to the plants now in flower, and see that those layers which were laid last month are kept sufficiently moist, to promote their free rooting.

When the layers are properly rooted, which will be the case with most sorts in a month after laying, provided due care be taken to keep them regularly moist, and to shade them from the heat of the meridian sun; they are then to be taken off from the old plant, with about half an inch of the stalk which connects them to it, and be immediately planted in small pots, one, two, three or four in each. The pots should be filled with the compost recommended [for carnations]. (438)

August

•Many beautiful ornamental plants may now be collected from the woods, fields, and swamps, which would grace and embellish the Flower-garden and Pleasure-grounds, if introduced thereinto: and that at a season when the general run of cultivated flowers are out of bloom; such as Lobelias of various kinds, Aletris farinosa [unicorn root or white colicroot], Asclepiases, in sorts, Asters, Cassia marilandica, Chelones, Cucubalus stellatus [Silene stellata], Cypripediums, Dodecatheon Meadia, Dracocephalums, Eupatoriums, Euphorbias, and Galega virginiana; Gentianas, hardy harbaceous Geraniums, Gerardias, Glycines, Gnaphaliums, Hedysarums, Helianthuses and Heucheras; Hibiscuses, Hypoxises, Irises, Liatriaes, Lysimachias, Melanthiums, Monardas, Napeas and Ophryses; Orchises, Oxalises, Podalyrias, Penstemons, Phloxes, Polygala senega, Rhexies, Rudbeckias, Sarracenias and Saxifragas; Sylphiums, Sisyrinchiums, Solidagoes, Spigelia marilandica, Trilliums, Veratrums and Veronicas; Limadorum tuberosum, Lilium superbum and canadense, Erythronium americanum, together with an immense number of other delightful plants.

All of the above, and any other kinds you meet with, that are worthy of notice, may be taken up, whether in, or out of flower, with balls of earth, brought home, and planted immediately; on taking them, up, cut off the flower stems, (if any) and when planted, give water and shade for a few days to the fibrous-rooted kinds; next year they will flower luxuriantly, after which, each sort may be propagated in its proper season. Observe in planting, to give each respective kind, a soil and situation as nearly similar as possible, to that, in which you found it in its wild state. (461) [Two comments. #1: we no longer live in a world where we can indiscriminately dig up wild plants in the countryside; #2: while the list includes many flowers that play a major role in 21st-century flower gardens, none of these flowers receive any individual attention in M'Mahon's gardening guidelines; his detailed commentaries exclusively focus on plants that would be found in English gardens, and many of those plants require extensive care because many gardeners in North America are working with a climate that will often place severe demands on those plants, both in winter and summer.]

- Gather flower-seeds, as they ripen, and preserve them til the season of sowing; most kinds will keep better and longer in their pods or husks, than when rubbed out. (463)
- Sowing Auricula, Polyanthus, Anemone, and Ramunculus Seeds. I find in almost every treatise on gardening, that I have met with, even in the celebrated works of Mr. *Millar [Philip Miller, 18th-century English gardener/botanist]*, directions for sowing the above seeds in this month, and September: I have tried the experiment for many years, but was generally unsuccessful; principally, on account of the seeds vegetating on the approach of winter, and these minute plants always being destroyed before spring, by earth-worms, slugs, snails, or by other accidents; therefore, have given up that practice as a bad one, and adopted sowing them in December . . . or in January or February, from which sowings I have uniformly been successful. I have noticed this subject here, in order to correct what I conceive to be an erroneous practice, lest the pursuing of it, would disappoint, and, consequently discourage, those who have a taste for these elegant flowers. (463-4)

September

- The various kinds of tuberous rooted flowering-plants may now be propagated by slipping or parting their roots, such as Peonias, Spiraea, Filipendula, flag-Irises, Helleborus hyemalis or winter aconite, &c. This last should have its roots planted in small clusters; for small solitary flowers scattered about the borders, are scarcely seen at a distance, but when these, snowdrops, crocuses, and dwarf Persian Irises, are alternatively planted in bunches, they will have a very good effect, as they flower at the same time and are much of a size. (493)
- Spring crocuses, snowdrops, fritillaries, crown-imperials, dens-canises, dwarf Persian, English and Spanish bulbous Irises, scarlet martagons, white, superb, Canada, and red lilies, and all other kinds of bulbs that do not agree with being kept long out of ground, should now be planted if possible: for although these roots may be kept up much longer if preserved from the air, in dry sand, saw dust, dry chaff or the like, yet they would not flower near so well next season, as if planted in due time.

Common tulips, hyacinths, narcissus, &c. may now be planted in the borders of the pleasure grounds, in small clumps of four or five in a place, covering the roots about four inches deep, if the soil be dry and light, if stiff and heavy, three inches will be sufficient; but the latter kind of soil should not be chosen for this purpose if possible: where the borders are naturally inclined to clay, proper earth should be brought on barrows, and holes made in the spots where you intend planting, about a foot in diameter, and at least, the same in depth, which fill with the good soil and plant the roots therein, covering as above. (494)

• Let the sides of the full grown hedges be always clipped in, nearly to the former year's cut, and as even and straight as possible; for it looks awkward and not workman like, to see the sides of hedges, especially garden hedges, waved and uneven; and always observe to clip a hedge in such a way as to *slope in a narrowing manner upwards*, that the top may be a little narrower than the bottom, and at the same time as even and level as possible. (496) [The admonition to trim a hedge "in a narrowing manner upwards" has proven difficult for me to follow in practice.]

October

- Planting various kinds of Bulbous-rooted Flowers. A good, sound, fresh soil, either of the black or loamy kind, (with the addition of a little coarse sea or river sand, placed round the roots on planting) and manured with rotten cow-dung, two years old at least, if the soil and situation be dry and warm, or rotten horse-dung if it be cold and moist, is all the compost or preparation required for the greater part of those flowers; observing that the dung should never come in contact with the bulbs, or be placed at so great a depth from the surface of the soil as to lose the advantage of the due action of the air upon it, which would render it poisonous instead of nutricious: in short it should never be placed more than eight or ten inches deep upon any occasion, where it can possibly be avoided. (533)
- This is a very proper season to prune roses, lilacs, honeysuckles, and indeed all kinds of hardy trees and shrubs, whether deciduous or evergreen. Let this be performed with a sharp knife, and not with garden shears, as sometimes practised. . . .

All suckers which arise from the roots should now be taken clean away for when suffered to remain they starve the old plants and prevent their flowering; many kinds of shrubs, for instance the lilac, will send forth great numbers of suckers from their roots, which if not annually taken off will spread over the ground to the great injury of your plants. These suckers, if wanted, may be planted in nursery-rows, for a year or two, and will then answer for renewing the old or for forming new plantations. (537) [My failure to control suckers has probably been the reason why the Alumni House Garden's honeysuckle have not been vigorous bloomers.]

• I always have had better success in the planting of evergreens in general, when done in the spring of the year, immediately before their vegetation commenced, than at any other season. (537)

November

- The pots containing your choice auriculas, polyanthuses, carnations, and double primroses, should immediately previous to the setting in of hard frost, be plunged to their rims close together in a gardenframe, and there defended from heavy rains and severe frost, by putting on the glasses and a suitable covering of mats, &c. occasionally, according to the necessity of the case. . . . Where there is not the convenience of glasses, mats and boards may be laid over the frame; or, if no frame, the pots may be plunged close together in a raised bed of dry soil, or tan, in a warm situation, and low arches made of old cask hoops, or the like, erected over them, on which to lay thick mats in wet or frosty weather. But in February, and early in March, while the frost is in the ground, or the leaves in a frozen state, and especially if they had been covered with snow, you must be particular not to expose them to a *hot* sun, which would be almost certain death to them. (558)
- Your double stock-gillyflowers and wallflowers, in pots, should now be either taken into the green-house, or warm, close rooms, or plunged to their rims in a dry, warm exposure, surrounded with a deep garden frame, where they may be protected during winter. These plants being tolerably hardy, will keep well by a very slight protection of boards and mats, or boards covered with straw, or other litter, when the frost is severe: they will seldom be injured before February, but a warm sun about the end of that month, if suffered to shine on them whilst the leaves or stems are in frozen state, would totally destroy them.

It would be of additional advantage to lay three or four inches of old tanner's bark over the surface of the pots, the better to preserve the roots from the frost. The plants must be aired occasionally in mild weather, for if kept too closely covered, they would become blanched, weak, and tender, and lose that robust growth so necessary to a good bloom of flowers. (559)

• You may now prune and reduce into due form, any hardy flowering shrubs, and forest-trees, whether evergreen or deciduous; but the more tender sorts ought not to be pruned till spring. (561)

- Dress gravel-walks, and mow grass-walks and lawns, after which roll them with a heavy roller, which will render the surface firm, smooth and neat during winter. Observe to do this work in dry open weather. (561)
- Turn your compost heaps of every kind, and spread them so thin that the frost may penetrate to the very bottoms of them; let the lumps be well broken, and all parts properly mixed. (562)

December

- In the early part of this month, should the weather continue open, or that it is practicable to work the ground, you may plant hyacinths, jonquils, tulips, double narcissus, star of Bethlehem, crocuses, snowdrops, or any other hardy kinds of bulbs that yet remain out of ground; but it is wrong, if it can be avoided, to defer the planting of them to this time. However, it will be better at all events, to plant the above kinds now, should it be practicable, than to keep them up til spring; but it will be very proper, and indeed I may say necessary, to cover the newly-planted beds immediately with straw, or other light covering, for such roots as have not produced fibers before the setting in of frost, are much more vulnerable to it, than those that have. (573)
- In hard frosty weather, when little else can be done in the garden, than the covering and uncovering of tender plants, &c. prepare lable sticks, to mark or number the various flowers and seeds when they are planted or sown, and prepare all the tools and every other necessary convenience for your spring operations. (575) [Darn good advice for "hard frosty weather."]