WHAT ENGLAND CAN TEACH US ABOUT HARDY BORDERS

A PERFECT SUCCESSION OF FLOWERS AND A PERFECT COLOR SCHEME

I thought I knew something about hardy borders before I went to England, but I was as a babe unborn. What we Americans don't know about the art of making pictures with perennial flowers would fill several large volumes. Our flowers are usually mere dots amid wide areas of foliage. We allow patches of bare earth to appear everywhere, even as late as July. We tolerate shocking color discords. We suffer stakes to show. We put perennials in front of shrubs, where most of the finest flowers are sure to be starved or overrun. We indulge in a mighty housecleaning every spring-digging, dividing, rearranging, and manuring-to the ruin of all repose and beauty in April and May. And if you, good reader, were called upon to explain what color scheme you used and what pictorial effects you aimed at, could you give a satisfactory answer?

Years ago my imagination was fired by that sensational passage in Robinson's "English Flower Garden" in which Frank Miles, the artist, laid down three startling propositions: Every square yard of ground should have bloom on it at least eight months of the year; every six inches of soil should contain its plant; and once a border is well made, it need not be dug up at all! One of the first things I did on reaching England was to inquire where I could see a flower border like that of Frank Miles. I was informed that Miss Gertrude Jekyll was believed to have the most perfect borders of their kind in England. I might have armed myself with letters of introduction, but I have no desire to intrude upon the privacy of one who publicly declares that she is "growing old and tired, and suffers from very bad and painful sight." And there is no need of anyone's seeing her garden because no one could possibly get from a single visit a hundredth part of what her latest book contains. "Colour in the Flower Garden," it seems to me, carries the art of designing hardy borders to a point far beyond anything previously written.

"It has taken me half a life time," says Miss Jekyll, "merely to find out what is best worth doing." Many people get their pleasure from collecting rare plants. Some prefer to make cut flowers the main feature. Others desire gardens that are merely decorative adjuncts of the house, i.e., gardens for show. But the supreme pleasure, Miss Jekyll thinks, comes from designing a garden that is a "yearlong succession of living pictures."

There is only one way of accomplishing this, in her opinion, and that is by dividing the whole estate into a dozen portions or more, each one of which is assigned a different period for its perfection. Thus she has one border for March effect, which contains snowdrops, crocuses, scillas, and the like. She has a spring garden devoted to April and the first three weeks of May, which includes tulips and daffodils coming through carpets of rock cre and creeping phlox. She has a "hidden garden" for the last days of May and first half of June (the period between tulips and irises), in which alpine flowers and tree peonies are a feature. She has a June garden, which is rich in roses, irises, and lupines. tember border that is mainly for perennial asters. And her main flower border, which is 200 x 14 feet, is designed to be at its best only from the end of July to the end of September -a little more than two months. The pitch of perfection which Miss Jekyll demands cannot possibly be maintained in any one part of the grounds for more than three months, and even then only by using potted plants as "fillers." Two months is about the longest period that is practicable. What a different idea this is from Miles's dictum that "a yard of ground should have bloom on it at least eight months

in the year!"

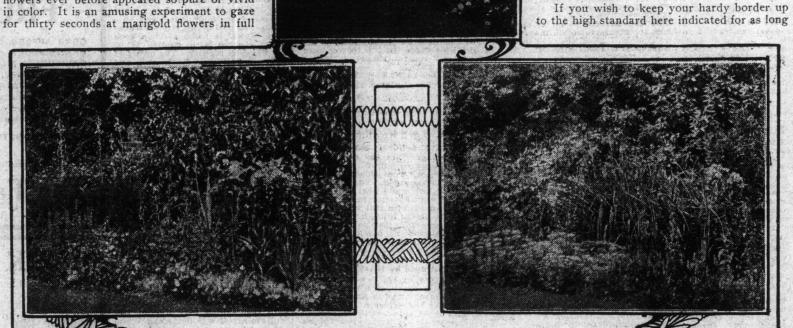
Is such a high standard worth while? Yes. I saw a border at Knole which, from end to end, was almost a continuous sheet of bloom. Countless thousands of flowers, in two unbroken lands lured the eye on and on until the straight lines seemed to converge in the mellow distance. The brilliancy and gaiety of such a spectacle are beyond the powers of pen or camera to convey. And at Knole this magnificent display was maintained by a simple and relatively economical plan. A great many perennial plants are grown from seed every year in coldframes. Most of these are white flowers, because white is the great peacemaker. This is the only color that can be put in anywhere by cheap labor without making serious discords. I saw a young woman putting in these fillers wherever there was a bare spot of ground and doing the work well for thirty-six cents a day! This simple plan makes white the dominant color in the border, and gives it an indescribably cool and airy effect which is most appropriate in hot weather. As I strolled along the borders, I was not conscious of there being too much white. It was only when one came to the end of the border and looked back over the whole extent that the white seemed dominant. I asked the gardener whether there was any other color scheme and he said no. Their main idea was to have every foot of ground covered, and they depended on white to soften all the color discords. Rarely did they remove any plant for lack of harmony. This is the cheapest way of

keeping a border up to high C that I know. But such a plan would never suit Miss Jekyll, because there is no definite color MINIA Border Full of California Poppies at Penshurst Place

scheme. She believes that each important color should be assigned a section in the border, where that color is to be dominant but not exclusive. Moreover, these sections should be so arranged that each one is the best possible preparation for the next. For example, suppose you spend five minutes enjoying the flowers of the vellow section. Your eve has unconsciously acquired an appetite for the complementary color, viz., blue. Passing next to the blue section, it seems as if no blue flowers ever before appeared so pure or vivid in color. It is an amusing experiment to gaze

advantage is that long, thin colonies do not leave big, unsightly places when the flowers are past; their deficiencies are more easily hidden. And the acme of refinement is to interlace the colonies at their edges, so that the colors do not resemble so many separate daubs on a palette. It is easy to indicate on the plan just how to do it. For instance, suppose colonies I and 2 lie next each other, and you wish to tie them together. In the first colony write the figure 2 in about three places near the edge.

If you wish to keep your hardy border up



though they are normally a dull green they

now appear a bright bue. These are not mere tricks. They are examples of optical or color laws that open a wonder world of delight, in which anyone may be an explorer and discoverer. We miss all this if we scatter colors anywhere in the border and make our enjoyment of colors simply a matter of feeling, instinct, or taste. The artistic and exciting thing is to work out a definite color progression. Miss Jekyll's border begins with a blue section, then a yellow, then orange and red, then yellow, and finally purple. This may sound very crude and mechanical, but so does every color scheme in outline. You should know how the transition is made from one color to the next,

For example, in the blue section of her border Miss Jekyll uses only pure blues and tender colors. Theoretically, blues and purples blend, and theoretically it is better to get harmony by using similar colors than complementary colors, for easy transitions are restfuller than contrasts. Practically, it is best to free the blue section from all purple, lilac, magenta, and allied colors. Only in this way can blue flowers be made to rival the sky in brilliancy. And since blue is a tender color,

sunshine and then look at the leaves. Al- Miss Jekyll allows in her blue section no other colors but the tenderest-the palest pink, palest yellow and white.

The pale yellow is important because it makes the transition to the yellow section. As the yellows become stronger, they merge into orange and then into scarlet, which is the middle section of the border. This is, of course, the strongest color and is, therefore, entitled to the central position in her scheme. At this point many people ruin their borders by trying to pass from scarlet through crimson to purple. A better way is to come down again through orange to yellow and end with a purple section. The danger, here, is to make the transition from yellow to purple. Miss Jekyll does it by carpeting the ground in the purple section with gray-leaved plants, and she uses the gray ground-cover in her blue section also.

By this time it must be evident that the only way to plan an artistic flower border is to draw it to scale on paper, laying off the whole area in blocks, say five feet square. Nearly everybody plants perennials in irregular but solid blocks. A much more artistic way is to plant in "drifts," i.e., long and rather narrow patches, which should generally lie somewhat diagonally. The chief advantage is that the effect is more pictorial. Another great

a period as two months you must be prepared to have "fillers" ready in pots, and to adopt two other devices for securing an unbroken succession of bloom. One is "pulling down," which can be practised with unreasonably tall flowers like sunflowers and golden glow, thus transforming them from tall and narrow plants into medium-sized roundish masses that are covered with bloom. The other is to study combinations of plants that naturally supplement one another. For example, "Gypsophila paniculata" will cover the ground after oriental poppies have lost their leaves and later the brown seed-spray of gypsophila can be obscured by climbing nasturtiums.

The great objection to the system I have outlined above is that it makes of garden design a fine art, and therefore calls for lifelong devotion on the part of conscientious and well-trained workers. Not one flowerlover in a thousand can realize such an ideal. For the ordinary person such a border as that at Sutton Place is "plenty good enough." was tempted to have a hundred pictures of it taken-say three a week, from spring to fallin order to show the wonderful variety there is in any hardy border as opposed to the bedding system. But that would have been too easy a victory. I decided to have five pictures taken

under serious limitations-all on one day, and in this single, narrow, straight-edged border You will recognize some of the same plants in all or most of the pictures; yet the total effect of each picture is remarkably different.

I must confess that I used to be prejudiced against straight borders. But for straight and narrow places they are appropriate, while undulating borders are not. The most charming English borders are not single, but double They lie on both sides of a straight grass walk several hundred feet long, and the flowers are seen against brick walls or yew hedges eight to twelve feet high. Such walks connect one part of an estate with another, like outdoor hallways between outdoor rooms. This i very different from the American idea of throwing everything open. We shall soon learn to value privacy more highly. Of course, much of the charm of these borders is due to the backgrounds which the flowers have. Vine-clad walls are a great expense, and a perfect evergreen hedge means a wait of twenty years. The yew is not to be relied upon in America, but hemlock has practically the same texture.

Even if we cannot apply some of the principles above stated, even if it would be wrong for us to attempt the care of more than one little border, and even if that border exhibits all the shortcomings mentioned at the beginning of the article, still we ought to get better results by bordering our lawns than by setting geometrical beds in the lawn, simply because the borders tend to frame a home picture, while beds in the lawn destroy it.

Beginners usually go to the florist for geraniums and cannas, and plant them in circular beds in the middle of the lawn. This bedding system gives the biggest show the first season, but it speils the unity of the lawn, leaves a blank space seven months in the year, is monotonous and gaudy, and the expense must be renewed every year because the plants cannot endure frost. On the other hand, a border of hardy flowers has an ever-changing charm-new forms, new colors, new odorsand it may be attractive two months longer. The plants are relatively permanent and may be multiplied without a greenhouse.

Therefore, I believe that one of the most important lessons we Americans have to learn about gardening is that nine-tenths of us ought to grow flowers in borders rather than in beds of geometrical shape. I believe that the hardy border ought to and will become a national institution, that it will help us develop an American style in gardening, and that somehow we shall be able to give to it a charm that that shall be distinctly American.

HINTS ON TULIP CULTURF

For general culture, the tulip in many respects without a peer among the spring flowerng bulbs. It is the hardiest of the class. It s one of the cheapest, in fact the cheapest, if size of bulb is taken into consideration. Its culture is so simple that the novice can scarcey fail. The smaller varieties bloom with the hyacinth, and the latest sorts tarry to usher in the June roses. Its wide variations in color appeal to the most fastidious taste, be the occasion grave or gay.

September and October are the ideal months for planting, that root-growth may be well established before winter. However, November planting is much better than no planting, and the writer has tucked bulbs into the ground just before Christmas with Juccess. But even if the ground is not frozen, deferring so late greatly increases the chance of failure.

Tulips prefer a sandy loam, hence the success of growing bulbs in Holland. Select a sunny slope, well drained and slightly elevated. If the ony available spot is a stiff clay, inclined to be wet and soggy, remove a foot and a half of sod and fill in six inches with small stones, bones and charcoal, and finish off with a light garden soil, well enriched by thoroughly decomposed fertilizer from the cattle vard. Tulips are gross feeders, yet direct contact with the fresh fertilizer will induce rot; as a safeguard, some prefer to surround the bulb with a little sand when planting.

Plant the bulbs six inches apart and four or five inches deep; a light soil admits of deeper planting and adds to the security against freezing. At the approach of winter cover the bed with leaves to the depth of several inches-enough to shield from hard freezing, vet not to smother the bulbs. Do not rush to take off with the first warm days, lest the bulbs be prematurely hastened into growth and destroyed by a return of snow and ice. When spring is assured, gradually remove or work the leaves into the soil.

The amateur sometimes falls into the error of leaving the bulbs undisturbed for years, young bulbs forming around and draining the vitality of, as well as crowding, the parent plant. This plan will seemingly work well for two or three years, but eventually the bulbs dwindle away and finally disappear entirely. Separation and replanting at least once in two or three years is essential to the best growth of the plant. Small bulbs grow to blooming size in two or three years, and, by separating annually, the increase in first-class bulb- is

Contrary to the rule among flowers, tulips lose in grace and elegance with the multiplica ion of petals, and there is in the single tulip a charm quite foreign to its double sister. The Duc Van Thols are the earliest, and most suit able for forcing, though their smaller size and

shorter stems render them less lawn. The Bybloems and Biza well-formed flowers, are bear the former with scarlet, pink mine on white or light rose latter showing dashes of red, on yellow ground. The Par and are characterized by their -a blending of crimson, yel hence the name. Cramoisi crimson with black centre, is group. The Darwins are large colors of surpassing intensity

Among the more subdued tiades, white shaded with soft Standard, white flaked with ro for extreme brilliancy Keizerl a peer. Gesneriana is a grand size and with flowers of unus tense red with a deep blue ce bright scarlet with a golden bar of the six petals and a jet-black with gold.

An attempt to arrange the is scarcely satisfactory, the v so widely in the time of bloom ous planting, or bunching th tain group together is prefer mingling of crimson and scar much as possible avoided. V a factor to be considered, on secure bargains by waiting u the season and buying in bulk, collections more than establish alluring claims. The only real method is that it necessitate attending such late planting.nam, in Suburban Life.

ICE-EATING HA

Since our nation eats and ice every day, the question how much of our national due-not to the habit of ice-e not got to that yet; but-to tamination of the material. Atlantic Monthly, summariz side of the matter, argues for of inspectors.

Most people think that ice be pure. That is true for the crystal; but what may lie be neighbor? A pond freezes fro ward. The crystals advance diers, pushing impurities in fr practically letting none throu as the surface film protects disturbance by wind, the impu settle peacefully to the botton ice may be taken as pure exc and lower surfaces. The wr however, that the dealer may expedients which may result any amount of impurity. He ice. That is, after the surface formed (with its covering of b dirt) he may make holes and neath flow up and freeze. 'I face is now embedded in the m Repetition of this process caus duct to be a sandwich of alt ice and bacteria. Or he may faces as they form, lay them of and freeze them together-w

sult, the sandwich. Artificially made ice is fro ceptacles. The freezing layer to the centre, finally accumu the impurities of the water, i ing them in. Anyone getting is likely to be in trouble. the dealer stops the process a cracks the mass, and lets the purities escape in the remain

Experiment revealed som about bacterial life. If the bacteria are frozen contains so for them and is not shot throu that is, if it is kept in the dark far be! w the freezing point them. Some are killed at on not include our chief enemy, lus. Nourishment or not if the etrated by sunlight, or, proba from the arc light practically will be dead in a short per weeks upward. If there is storage alone will in some l them all. Experiment showed limits of a single species, say cies, there were sub-species ab guishable except by their di resistance to prolonged cold.

The writer therefore argue long stored, free from its su "flowed" or "layered," and ha per precautions against cor artificial ice is used the ques the water from which it is for

GADSKI PREPARES FOR PERTOIRE

Mme. Gadski has returned several weeks' stay at Bad I ville. The prima donna made in her American touring ca studying her new parts for h Metropolitan Opera House. "Leonora," in "Il Trovatore," ance in this role in New York have the leading part in "Gerr which has met with great succestory deals with the great N struggle of the Germans aga conqueror. At the New Thea will assume the leading role a one-act opera by Leo Blee the Royal Opera House, Berli

Little Bobby was saying mother's knee, but so rapidly him why he did not speak mo cause, you know," he replied all the other children waiting