

HAVE YOU EVER SEEN A BLUE ROSE? A HORTICULTURAL PROBLEM

THE gods," said an old Frenchman, "have made but two things perfect—woman and the rose."

The old gardener, tending his bushes with a careful hand, added as this remark was quoted that it was like a Frenchman to drag women in, and went on trimming his beloved blooms. Sweet-heart and wife and children they had been to him, and he was not an exceptional old gardener, either. The passion for flowers, and above all the passion for roses, has a depth and intensity unsuspected by the mere amateur. No scientist is more absorbed in his work than he who experiments with roses.

In the year of grace 1800 M. Guillemeau, a French naturalist, wrote a book on the natural history of the rose, and in the course of this volume he remarked that there were then 100 varieties of that flower, one-third of them single and the rest double. If you want the number of varieties of roses in the world to-day, that is, the number created since the year 1800, you have to multiply M. Guillemeau's figures by eighty or ninety.

The last hundred years has been a busy one so far as rose gardens go. The secret of making new varieties is not well enough known yet. The process is so mysterious and baffling, throwing back at the experimenter so many failures before it deigns to give one success, that it piques the curiosity and ambition of every gardener. He knows what to do when he tries to get a new rose, he knows that you have to snip off the anthers of one rose and fertilize the pistils of another flower and tie a bag over it so that busy bees will not interfere with your work; but he also knows that only under the most favorable conditions will seed form in the fertilized rose, and that only 2 per cent. of the seeds will come up even if he gets them.

It is a queer chase, this search for new and beautiful roses, but it is a fascinating one, for many a man gives his life to it and counts himself repaid and happy when he produces one or two blooms different from those which have delighted his eyes until that moment.

This passion for the rose is a very modern thing and a very ancient one at the same time. That is, it belongs to the nineteenth century, and then you jump back to the days of ancient Rome and Greece before you find anything like the skill that gardeners show to-day. The Goths and the vandals, when they swept

down on Rome, did away with the cultivation of the rose along with the rest of the civilization that Greece and Rome had built up.

Before that time the nobility of Athens and Italy had been just about as busy searching rose perfection as we have been recently. All the poets are full of the praise of the rose, and all writers mention it. Strong-minded old Seneca sets forth as a sign of degeneracy that in his days people wanted roses in December, and Juvenal complained that it was not safe to walk on the streets of Rome lest some one's pot of roses should fall out of the window on your unlucky head. When King Midas ruled in Hellas there was the "rose of a hundred leaves" that was sung by Theophrastus, and the same gentleman tells us that at Philippi the inhabitants cared greatly for their roses, which grew double, thanks to their care and skill. In fact, very early indeed man must have begun to domesticate the rose that grew wild about him when he hunted the mastodon. Ages back primitive woman must have begun to plant the little flowers about the cave doors.

When, after the fall of Rome, the dark ages came, only here and there in the gardens of monasteries and palaces did the rose smile to cheer some meditative monk or love-sick lady. The Crusaders were the first to bring the rose to the west, for the home of the rose is probably the Orient, and it was doubtless on the plains of Middle Asia that the first wild rose showed her little five-petaled beauty some time during the tertiary period—at least that is what the fossils say. Whatever we have, of the splendor of roses in the west is really only borrowed from the Orient, and to this day there are more wild roses on the Asiatic plains than anywhere else in the world.

But to return to the Crusaders. It was the Comte de Brie, a hard fighter, if ever there was one, who brought the rose all the way back from Palestine to Provence, a long way for so delicate a thing to come in so stern a hand, but he brought it safely to his lady. Later on this same rose was introduced in England in the time of Henry III., and, of course, after that there were white and red roses growing quite commonly in the gardens of royalty and nobility. If they hadn't been, how could we have had that picturesque war of the Roses?

When the war was over the fact that the science of cross-breeding was known

Many Varieties of the Queen of Flowers Created in a Century, but Blue Roses Still Elusive.

in England was attested by the union of the white rose of York with the red rose of Lancaster, a cross fertilization that supplied the red and white rose which adorns the garden to-day. So long ago then as the fourteenth century there were gardeners who loved to experiment.

In the eighteenth century the rose was not as highly regarded as it might be because the gardens were very formal, and you cannot plant roses along a border to stand up straight like so many grenadiers, as you can lilies or tulips or flowers of that sort. There was an irrepressibility about the rose that did not go with the eighteenth century, although, of course, she had her lovers then as always. It was after 1800 that the varieties began to jump up.

It was that very intelligent lady, the

Empress Josephine, who made the cult of the rose really fashionable. Along with the revival of Greek costumes and the introduction of artistic designs from the Orient and the general breaking away from the style of the preceding century there came the passion for rose gardens, imported largely from China and Japan. The garden of the Empress was famous—do we not all remember the big Malmaison roses of the gardens of our childhood, so named because they cheered the poor lady in the loneliness of her Château de Malmaison after her downfall?

From France the fashion spread to England, and there as on the Continent the great ladies cultivated the rose and the growers sought new varieties to name them after aristocratic patrons. They are forgotten to-day, many of these varieties

that bore the noble names of France and England, but they were beautiful in their day.

In this way the number of different kinds of roses swelled rapidly. In 1825 somebody counted 2,500 varieties. Less than twenty years later the number stood at 5,000, and then came the somewhat arduous climb of 9,000, where the figure stands to-day.

There may not seem to be very much more to be done with the rose, but that is a very amateurship view to take of the matter. Any rose grower will tell you that there are lots of things to do. The perfect rose is yet to come—that is, the hardy rose, the beautiful rose, the many petaled rose, the ever-blooming rose have not yet been united in one splendid miracle.

All these good qualities are found in some one rose. The point is now to unite them. It takes infinite care and still more infinite patience.

A grower must be prepared to have a thousand failures before he has the glimmerings of one success. Sometimes when the cross-fertilization is successful the resulting rose is worth nothing because it has lost the good qualities of both parents. Then there comes after perhaps years of waiting the wonderful moment when the grower sees the child of two lovely roses blooming lovelier than either parent and unlike both.

It has taken more than 100 years of steady application on the part of many skilled men to bring us where we are to-day in regard to the rose, and it is going to take a lot more before we have the absolute perfection. There is, for instance, that matter of the blue rose. A blue rose is held to be about the hardest thing in the flower-growing world to attain.

It is, in fact, a direct flying in the face of nature, and there is always plenty of excitement in pitting one's self against a great force that keeps saying "No" all the time. Blue is the rarest of all colors in flowers. There are twice as many reds and yellows as blues and more than twice as many whites in nature.

Moreover, it is a rule in nature that blue, yellow, and red are never found in the same species of flower. There are many kinds of flowers which show the two colors, but the three are a quite different proposition. None are so rich as that. Now, there are plenty of red and yellow roses. The point is, how are we going to get a blue.

It can't be done by any chemical process, of course. Any one rose can easily be made blue, but there is no known way of treating the soil in which a bush grows so as to change the color of all its flowers, and even if there were such a way the progeny of the roses would revert to the ancestral type. The blue rose is to be obtained—if it ever is attained—by combining roses of different colors and using the most promising as parents for a newer and bluer race.

There has been a pale lavenderish-blue rose produced by a German grower, but it is not by any means a true blue, and the grower has not explained the process by which he produced it. Nor is it a beautiful rose. The flower is small and unsatisfactory in size and shape, as well

as color, still it is the nearest approach to a blue rose that the world has yet seen, and that is enough to bring plenty of honor to Schmidt, the grower. It will not, however, keep other growers from seeking a better rose. In fact, the approximation that he has arrived at will doubtless encourage other searchers to fresh efforts.

Really enormous sums are invested nowadays in roses. Some farms produce nearly \$200,000 worth of roses annually, and when they are successfully run they pay very good interest on the money invested. But, of course, it is no business for an amateur. Especially cross-fertilization is nothing for the young scientific mind to play with.

It takes imagination to devise, and enormous skill to carry out, a plan for producing a new rose. When you have nine thousand products of combined nature and human industries, it is not an easy thing to make a place for a new one, but though rose growing as a business is difficult it is about as interesting as any form of activity that could be imagined, given at first, of course, a love of flowers, for no flower responds so rapidly.

Then there is the perpetual surprise the rose gives the grower. He takes a white rose and a yellow rose hoping to get offspring showing certain characteristics, and there is born an ugly, undersized, single rose, not worth anything. Again he crosses two excellent varieties and the result is a thing of beauty which has no power to reproduce itself. There was no more reason for the result in the one case than in the other. The only thing to do is to keep everlastingly at it until you get what you want by some means you don't yourself understand.

But not a grower ever tires of the tricky, charming object of his devotion. The rose is always the most entertaining of companions. Whoever first referred to the flower as the "haughty queen" lacked imagination. Some kinds of roses will grow anywhere on the slightest provocation. Given a bit of encouragement, the smallest and shabbiest yard can have its bush, and even wild roses show so great a desire to aid in adorning the earth that they have developed all by themselves nearly a thousand different species. The rose, in spite of her beauty, is the least snobbish flower that grows, the best friend of the poor man as well as the chiefest treasure of the rich.