

A ROSE GALLERY FROM INDIA

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Roses are grown with great enthusiasm and passion all over India. But first, in order that you may understand better, I would like to highlight certain aspects of India's climate. A well known authority on roses has divided India into 8 agro-climatic zones, but, as you can imagine, there are many microclimates within each zone. But the 2 most distinguishing features are the monsoon, which are winds blowing from the south west bringing India most of its rainfall from June to September, and the Himalayas, that great mountain chain with an average height of about 20,000 feet, which form the northern boundary of the country, stretching for about 1500 miles west to east. The Himalayas which are home to almost all India's wild roses, represent an amazing variety of climates from ice deserts in the extreme west adjoining the Tibetan Plateau, to places like Cherrapunji in the extreme east which has the world's highest rainfall of 500 inches. The existence of the Himalayas has a profound effect on the Indian climate. During the summer and monsoon months they effectively stop the movement of the southern winds into central Asia, thereby greatly increasing heat and rain. In winter the range blocks the movement of cold air from the heart of Asia and consequently temperatures do not fall as low as you would expect from the latitude.

As I mentioned earlier, the Himalayas are home to a variety of rose species. In the extreme west we have the golden rose, *R. foetida* (more popularly associated with Iran), as also *R. ecae*, again bright yellow in colour but much smaller. But the most typical rose of the dry western Himalayas is surely *R. webbiana*, with lilac pink flowers inhabiting the most stony inhospitable places at altitudes around 10,000 feet; the flowers of incredible grace contrasting admirably with the rugged landscape. Progressing eastwards, we have *R. macrophylla*, so named for its large leaves with spectacular flowers of dark pink verging on red – "as large as a man's hand, and one of the most beautiful of Himalayan plants" as described with gusto by Sir J.D. Hooker, the British botanist during his pioneering travels in the Sikkim Himalayas in June 1849.(1).

I still remember the thrill with which I first saw *R. macrophylla*, when, on the way to the Valley of Flowers - an alpine valley which boasts of a tremendous variety of flowers, including the startlingly beautiful blue poppy, *meconopsis* – on turning round a sharp bend in the mountain track, I came across a bush of *macrophylla* in full bloom. In fact, I saw the reflection first, of the flowers, in the ice-cold waters of the Pushp-Ganga, - the "Flower Ganges" – a stream originating from the Valley of Flowers.

The central Himalayas are also home to *R. sericea*, which, as you probably know, is the only species with flowers of 4 petals; as also *R. brunonii*, the Himalayan musk rose with extra vigorous growth and almost purplish foliage contrasting with the milky white fragrant flowers. Going further east, we have one more of the musk rose clan, *R. longicuspis*, with beautiful evergreen foliage. This rose, or its close relative, *R. mulligani*, is the one which adorns the White Garden at Sissinghurst, England. But the most typical, and indeed the most spectacular rose of all is surely *R. gigantea*. Graham Stuart Thomas' "Empress of wild roses" which is found in the extreme east where the Himalayas merge into the mountains of India's North-East, adjoining Burma (Myanmar). This giant rose growing to almost 50 feet into the forest trees with stems as thick as a man's arm is charmingly described by Sir George Watt, India's first Surveyor-General and keen botanist, who first came upon it in 1882, as growing through the treetops and producing such a profusion of giant golden flowers as to make the trees look like golden magnolias from a distance.(2)

Talking of musk roses we have one more representative in the southern mountains where I live, – *R. leschinaultiana*. It has large white flowers and most distinctive plum purple stems.

But the most interesting of India's wild roses is undoubtedly *R. clinophylla*, which has lovely evergreen foliage and white flowers with an extraordinarily intriguing scent of acetone (nail polish remover). More on this species and my work with it later.

As you can imagine the plains of India are generally too hot to grow species roses, though some like *R. laevigata* and *R. banksia* are grown, especially in north India. But some of the heritage roses, and particularly the Teas/Chinas as well as studier Bourbons and Hybrid Perpetuals are widely grown. Despite the craze for things modern – including roses – so typical of a rapidly developing country, heritage roses hold their own, largely because of their use in worship, in festivals, as also in the manufacture of various rose products.

Some of the old roses which do well include the Teas – Madame Falcot, Mrs. B.R. Cant, Devonensis, Lady Hillingdon, Etoile de Lyon, as well as the great Tea Noisettes – Maréchal Niel, Lamarque, Céline Forestier and a few others. The Chinas are well represented with varieties like Archduke Charles, Cécile Brunner, and Perle d'Or. Among the Bourbons, we have the first one, Rose Edward growing throughout India as also Souvenir de la Malmaison and Gruss an Teplitz grown both in the east and west. Among the Hybrid Perpetuals, the popular ones are the huge Paul Neyron, which does particularly well in central and northern India as well as Frau Karl Druschki. Fanciers still grow varieties like the two reds from Dickson - Hugh Dickson and George Dickson, and many on the borderline of the old and new roses, like Kaiserin Auguste Viktoria, E.G. Hill, La France, Président Macia etc.

Coming to modern roses there can be no doubt that these are most popular both in home gardens and in public parks. Among the latter can be mentioned the lovely gardens of the cities of Bhopal and Chandigarh, the gardens of the Airports Authority of India and the Rose Society of India, both in the capital city of New Delhi. A spectacular addition to India's public rose gardens is the Centenary Rose Park in the hill station of Ootacamund in the Nilgiri Mountains of South India, which has a temperate climate similar to yours. This park boasts of over 2500 rose varieties.

Popular varieties include a large number of Americans – First Prize, Gladiator (Uncle Joe), Friendship, Paradise, Brandy, Gold Medal and Oldtimer, as well as some of the European ones like Landora, Via Mala and Just Joey. In New Delhi gardens even older varieties like Garden Party, Michelle Meilland, Christian Dior, and Mr. Lincoln reign supreme. Some of India's rose nurseries have amazing collections of the latest roses, and one, K.S.G. Sons has a catalogue which lists over 1300 varieties.

But we badly require varieties with an "India signature", that is, specifically bred and adapted for cultivation in our warm climate. Quite sometime back, India's premier rose breeder, B.S. Bhattacharji, talked of the need to evolve a separate line of breeding for heat resistant roses. This of course implies a conscious reversal of western rose breeding with its emphasis on winter hardiness.

When I started rose breeding in the 1960s I was very conscious of the Bhattacharji dictum. As it happened the first "hand-painted" rose, McGredy's Picasso made its appearance at this time. While the flowers were spectacular in cold weather the unique markings almost disappeared when our weather was less than ideal, i.e. hot and humid, as is often the case. Again, to this day, Floribundas are not very popular in India, since the preference is for large flowered H.T.'s. So my emphasis from the beginning was on producing a H.T. type rose in the hand-painted strain, where the markings would not disappear in the heat.

Beginner's luck resulted almost immediate success with Priyatama (1981) with quite spectacular markings of H.T. form and size, from the cross of the red and white bicolour H.T. Inge Horstmann (Tantau) into Picasso. This variety is in the background of most of my hand-painted roses.

Another rose breeding interest of mine was to evolve roses in unusual colours. What is the origin of colours such as lilac, brown and even green?

The famous English hybridiser, LeGrice has analyzed this subject and come up with the intriguing theory that the lilac and purple colours arise when there is a

complete admixture of colour (in the parent roses) with a considerable bias towards bicolours which derive originally from *R. foetida persiana*, as employed by Pernet Ducher. The browns arise from the parental breakup of the lilac and purples.

The search for unusual colours started with intercrosses of the Bourbon Gruss an Teplitz into several lilac roses hoping to combine heat resistance with unusual colours. Seedlings from this initial cross have been in the background of my subsequent work.

These special interests apart, many other roses have been released following standard hybridization techniques.

We now come to the crucial question of developing a separate line of heat resistant roses. It is obvious that mere intercrosses with Western rose varieties will not result in substantial improvement as the genetic base is not altered by such crosses. We have to add something new if the goal of heat resistance is to be achieved. To this end I have been working with the tropical rose species, *R. clinophylla* as well as the form of *R. gigantea* found in North-East India.

Work with *clinophylla* proved very difficult in the initial stages, but ultimately a breeding line was established. With the seedlings thus evolved as the basis, considerable progress has now been made. I will show you some of the seedlings resulting from this line of breeding.

I have also simultaneously been breeding with *R. gigantea* using as I said the Indian form which has pale yellow flowers rather than the white form originating from South China and Burma. This species has tremendous vigour as well as lovely evergreen foliage but from the breeder's point of view it has the incomparable advantage of being easy to cross with many modern roses, for the obvious reason that it is one of the stud species of the modern rose. The high centered form of modern H.T.'s is clearly due to the influence of *R. gigantea*.

The final step in the evolution of the ideal heat resistant rose is of course to bring the two lines together. As a beginning seedlings of the cross *R. clinophylla* into *R. gigantea* have been raised of which one has flowered with cream coloured flowers of the *R. gigantea* type.

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- (1) J.D. Hooker, Himalayan journals : notes of a naturalist in Bengal, the Sikkim and Nepal Himalayas, the Khasia Mountains, &c., 1855: p. 65, June 1849 <https://archive.org/details/b29353403/page/65/mode/1up?q=%22great+red+rose%22>

A great red rose, one of the most beautiful Himalayan plants , whose single flowers are as large as the palm of the hand, was blossoming, while golden Potentillas and purple primroses bordered the stream .

(2) Ellen Willmott, Alfred Parsons, The Genus Rosa, V. I, 1910, p. 34:
<https://www.biodiversitylibrary.org/item/215889#page/62/mode/1up>

In an unpublished diary Sir George Watt thus describes the Rose as he has met with it in the Himalaya :

“ This is by far the most obvious and most characteristic Rose of the Himalaya. It climbs over the bushes by the wayside and over the small trees of the forest. It thus produces dense rounded masses which when in bloom look like patches of snow. Its bright flowers are the delight of bird and bee, and they perfume the air in a manner few people could realize who have not lived in the invigorating atmosphere of the early months of summer on the outer ranges of these mountains. And yet a bunch in the hand is overpowering rather than pleasant. But the western Himalaya without the musk rose would be without half their charm.”