



KEEPERS OF THE GREEN



BHARTI DHARAPURAM

The Philippine Ground Orchid at the plant nursery

The article profiles one of the most treasured activities of the Indian Institute of Science (IISc)

 **BHARTI DHARAPURAM**

Secret Garden

The rusting gates stand in stark contrast to what greets the visitor next—a path lined by pink flowers. On the left are chandeliers of yellow fruit dropping down several feet from a fish-tail palm. Ahead, there is an old, stately white building adorned by an over-enthusiastic bougainvillea with its bright pink flowers falling over itself. Adjacent to the white building, is a glass-house, also old, with a *Petrea arborea* out front, painted over by a riot of blue flowers with elegant violet collars. This is the plant nursery, tucked away in a quiet corner of IISc, dressed in its spring-time best.

There is more. Neatly arranged pots put out flowers of every imaginable colour playing host to a variety of dawdling butterflies and impatient bees. And the tilted gaze of a scare-crow watches over the garden abuzz with life.



ASHOK KUMAR MALLIK

A variety of flowering plants at the nursery

The plants in the nursery make an eclectic collection—orchids and aroids, begonias, bonsai *Ficus* trees, *Thunbergia mysorensis* climbers with yellow chalice-like flowers, the gymnosperm *Zamia* from the Americas with beautiful shiny leaves, turmeric plants with sweet-smelling white flowers,



a *Bolusanthus* tree from Africa which drapes the ground with small blue flowers in spring, and the spectacular South American scarlet-flame passion flower, *Passiflora vitifolia*, to name a few. There are a number of edible fruiting trees as well—star-fruit, sapota, mango, papaya, amla, water-apple, litchi, karaunda, custard apple, amtekai and Surinam cherry. The vegetation here supports a diverse animal community; insects, birds, snakes, and even slender lorises call this home.

Reaping the Fruits of the Past

The activities of the nursery are overseen by B Sridhar who joined the Institute in 1986 soon after his Masters in Horticulture from the University of Agricultural Sciences, Bangalore. According to Sridhar, the old white building housing the nursery was once home to a radio transmitter, part of the British war effort. After the war, a lecturer from the Department of Electrical Technology, Sisir Kumar Chatterjee, conducted his research in this building. Sridhar credits Chatterjee with sowing the seeds of organized horticultural activity in the Institute when he started a garden around the building.



BHARTI DHARAPURAM

Nursery office

The reins of the garden that eventually evolved into a nursery were then passed on to BS Nirody. Not only did Nirody make the garden into a nursery, he was also largely responsible for transforming the campus into what it is today.

From small town beginnings, Nirody followed his passion for plants to obtain a Master's degree in Agricultural Sciences from the United States. On his return to India, Nirody initially worked as a Kannada-English translator, taking up horticulture projects



Courtesy: JYOTSNA DHAWAN

BS Nirody

on the side. When the war broke, he grew "English" vegetables in the Nilgiris to feed the army in the plains. Later, when his family decided to settle in Bangalore, they made their home in Malleswaram, just outside the gates of IISc. During this period, Nirody came in contact with the German botanist, Gustav Krumbiegel, one of the architects of Lal Bagh and the planner of many of Bangalore's avenues. Nirody's passion and talents were recognized by AG Pai, the then Registrar of the Institute, who asked him to take over the nursery and also conduct plant breeding research on campus.

"He was an incredibly enthusiastic person," says Jyotsna Dhawan, Nirody's grand-daughter and a stem-cell biologist at the Centre for Cellular and Molecular Biology (CCMB), Hyderabad. "He could identify plants with his eyes closed," she adds, vouching for his botanical skills.

"He could identify plants with his eyes closed"

He brought some of the first *Tabebuia* trees to campus, bred his favourite begonias using tricks he invented, planted *Cassia* and *Jacaranda* trees and grew different kinds of ferns. He also had a collection of many varieties of *Gerbera* in the nursery. He trained the first head *maalis*—Thimma and Mudda who passed on their skills to future gardeners. His infectious enthusiasm for plants spread not just



Courtesy: JYOTSNA DHAWAN



Nalini Nirody Dhawan

among his employees, but also his friends. Among them was Homi Bhabha, the well-known nuclear physicist, who was then at IISc. He brought back plants to Nirody from his travels around the world, including the country's first white bougainvillea plants from Brazil.

"Everyone in that family was totally plant mad. There was an immense excitement about plants, about their Latin names and where they come from," Dhawan fondly reminisces. Her mother and Nirody's daughter, Nalini Nirody, kept alive her father's legacy in the nursery for several years. A cytogeneticist by training, she eventually married an aeronautical engineer, Satish Dhawan who went on to head the Institute for over two decades.

The nursery was a place where Nalini Nirody Dhawan could meditate. "If mum could not be found in the house, she was in the nursery," Jyotsna Dhawan recalls.

Both father and daughter were hands-on people and loved working in the soil themselves, finding new ways to propagate plants. One can still see the same spirit of gardening in the nursery today.

Another person who, Sridhar says, has made a difference to the nursery is the former Director of the Institute, CNR Rao. According to him, Rao was responsible for building a compound around the nursery premises. Sridhar adds that during Rao's tenure, grazing by cattle which came from outside the Institute—a routine occurrence until then—was also banned. He still remains a kind patron of the nursery, says Sridhar.



MOHAN REDDY

Campus vegetation is also maintained by the nursery

Green Campus

The Institute's gardeners are also responsible for nurturing the greenery on the more than 370 acres of campus.

They work tirelessly to maintain its landscape and ensure that visitors to the campus carry with them lasting memories—of *Tabebuia aurea* trees bursting into cheerful yellows in the spring, of sunlight filtering through the leaves of its old trees, on hazy mornings, or of the brilliant hues of the annual flower show.

When the Institute was established in 1909 on land donated by the erstwhile Maharajah of Mysore, Krishnaraja Wodeyar IV, the landscape was different—scrubs and open grasslands dotted the relatively barren landscape. Today it is densely wooded with trees of all kinds, with many of them coming from foreign lands. The transformation is because of the tireless work of its gardeners, both past and present.

Landscaping

Unfortunately green spaces on campus have shrunk over the years as new buildings have sprung up to accommodate new labs, departments and hostels. However, Sridhar and his team see opportunities in such projects. They seek to add colour to these otherwise drab structures by landscaping and adding gardens. "We are here to take up any challenge," says Sridhar who believes that utility can go hand in hand with aesthetics. A glowing example of his work is the landscaping around the Centre for Nano Science and Engineering (CeNSE). It consists of various garden elements—mounds, creepers,



BHARTI DHARAPURAM



Lawn around the Centre for Nano Science and Engineering (CeNSE)

pergolas, fencing and a pretty, stone path winding through the lawns. It makes a pleasing sight, and is the envy of many departments nearby.

Annual Flower Show

Though the gardeners work inconspicuously for most of the year, their efforts take centre-stage during the Founder's Day celebrations in March. It is marked by an elaborate flower show in front of the Main Building as a tribute to JN Tata—the founder of IISc. Preparations for the flower show start months in advance, as early as in October. The large plot within the nursery is used to grow annual flowering plants of various colours and varieties. They are short-lived plants which require bright sunlight to grow well. Several varieties of flowers need to bloom at the same time during the flower show. "By practice, we have staggered planting in several lots," Sridhar explains.

But Sridhar and his team are dependent on the vagaries of nature as they prepare for the flower show. "During September-October, if we get off-season rains, our plants die because of fungus [infestation]. Sometimes, we fail," he concedes. The occasional failures, however, do not deter Sridhar from experimenting with colours and patterns every year, adding new flowers to present something novel. "I design the show. But ultimately they [the gardeners] are the people who transform my ideas. I need to completely acknowledge their efforts," he says.

"They [the gardeners] are the people who transform my ideas. I need to completely acknowledge their efforts."

Unsung Heroes

Even when the gardeners are not working on landscaping or preparing for the flower show, there is always work to be done. There are routine chores including cutting, planting, collecting seeds, sowing and grafting. There are only four other permanent gardeners; the rest hold temporary positions. Many of them come from families who have worked with the soil for generations. They come from places like Yelahanka, Nelamangala and Hesaraghatta on the outskirts of Bangalore, where agriculture is giving way to construction.

Over the years, Sridhar has seen a shrinking workforce; the nursery once had up to 70 permanent gardeners. "If we lose them, we'll lose all our tradition... the knowledge will be gone," he laments. He hopes that in the future the Institute will invest in "good gardeners".

"If we lose them, we'll lose all our tradition... the knowledge will be gone"

But the nursery has learnt to use the available resources and man-power as efficiently as they can. Sridhar says earnestly, "My duty is to take care of the vegetation on campus. I want to conserve this place and also add species to its collection, be it a tree or a creeper. The show goes on here."



BHARTI DHARAPURAM

Plant nursery staff with their work on Founder's Day