

'There are so many beautiful Indian native species that are not yet used for vertical gardens'

Renowned botanist Patrick Blanc - whose 'Tiger Wings' project was recently opened at the KIA - lists Kodagu, Nilgiris, Darjeeling, and Sanjay Gandhi National Park among his favourite green spots in India



Tiger Wings, a stunning vertical garden wall located within the Kempegowda International Airport. SPECIAL ARRANGEMENT

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It's hard for anyone to stand out at an airport terminal termed as a "terminal in a garden." Yet, instead of blending in with the carefully landscaped greenery, renowned botanist Patrick Blanc stands out with his all-green ensemble - from hair dyed green to his shirt, neck-piece, trousers, down to his green shoes.

As people - ranging from journalists to horticulture and landscaping professionals and students - clamour to get a picture with him against the backdrop of his newest project at the T2, Kempegowda International Airport (KIA), Bengaluru, Patrick obliges them all.

The project, 'Tiger Wings', a 30-feet-high, 160-feet-wide installation at the KIA T2, has two walls each of 80 feet boasting of over 15,000 plants across 153 species, many native to Karnataka and the Western

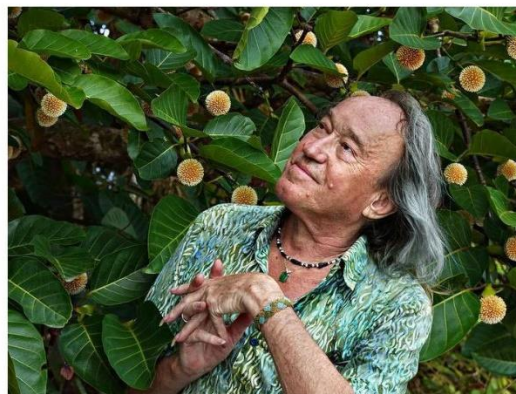
Ghats. The wings represent the aeroplane wings, while the tiger was chosen as it is the national animal of India. The concept of 'tiger wings' will come alive when the flowering begins, as asparagus plants trace the silhouette of the aeroplane wings, while red, orange, yellow, and white *Isora* flowers will represent the tiger's signature pattern.

Biggest project

This is Patrick's biggest project in India and the only one after the French Embassy in New Delhi, which was over two decades ago.

In a conversation with *The Hindu*, the man who is touted to be the "inventor of the vertical garden," spoke about his first project, his favourite spots in India, and how vertical gardening can survive the impacts of climate change.

He recalled that it was his research on tropical plants growing in forest understorey receiving only about 1% of full sunlight,



Patrick Blanc observing the spherical inflorescences of *Neolamarckia* (syn. *Anthocephalus*) *cadamba* on the Kinabatangan river, Sabah, Borneo, July 2022. SPECIAL ARRANGEMENT

during his PhD course in Botany at the Paris University, that inspired his first project.

"Many of these plants are growing on rocks or tree trunks, which means

almost without soil, their roots are growing superficially in the thin layer of mosses. That is what inspired me to create vertical gardens with a thin layer of felt which is similar to

mosses on rocks. I created my first vertical garden at the Museum of Sciences and Technology in Paris in 1986," he said.

At the unveiling of 'Tiger Wings' recently, he made



Hari Marar, CEO BIAL, and Botanist Patrick Blanc at BIAL.



For vertical gardens, it is always much better to use plant species that are naturally growing on shaded rocks, exposed cliffs or growing on tree trunks

PATRICK BLANC

his displeasure known about most vertical gardens restricting themselves to a handful of species. India, he pointed out, is a huge country with many different climates - from lowland perhumid climate like in South Kerala, to fresh hill climate like Bengaluru, dry climate in Rajasthan or mountain climate like around Darjeeling or in Meghalaya.

"This means that the plant species thriving in these different climates are not the same. There are so many beautiful Indian native species which are not yet used for vertical gardens and landscaping and this is an open field for new research in order to increase the species selection. For vertical gardens, it is always much better to use plant species that are naturally growing on shaded rocks, exposed cliffs or growing on tree trunks.

Among the genera of native Indian plants which are totally under considered, I can mention *Strobilanthes*, *Impatiens* and *Sonerila* for shaded or fully

exposed situations depending on the species," he said.

For his Bengaluru airport installation too, Patrick said that he visited several forests in the Western Ghats, selecting rare plant species from these diverse ecosystems to ensure that the wall features species native to the region.

He picked "the fresh hilly areas" of Kodagu district in Karnataka, the Nilgiris, around Darjeeling and the Sanjay Gandhi National Park among his favourite green spots in India, but added, "In fact, any place in the world where you can find large areas of untouched vegetation are my favourite places."

Relaxing effect

When asked what the relevant agencies should be keeping in mind while landscaping public spaces, he said the most important is to acknowledge that the plants will have a relaxing effect on people if they are healthy and growing for many years.

"For instance, it is a pity to see most vertical gardens with so few species, usually only 10 to 20, all of the same size and cut down or changed as soon as they are growing. These fixed vertical gardens are a kind of vertical green tapestry very different from a living situation in a forest. The effects of relaxation on people and purification of the air can be obtained only if you leave the plants growing freely according to their natural architecture.

Instead of a green carpet, a three-dimensional vertical garden becomes a kind of natural ecosystem where butterflies and birds come for nesting or drinking nectar or even eating small fruits. These visions will encourage the children to learn more about plants and protection of the environment," he said.

Staying with protection of the environment, Patrick speaks about the impact of climate change on vertical gardens, a topic he has published a research paper on. He says that climate change by itself is not a problem for plants as the plant kingdom contains species that have adapted to all the types of climates - coldest to the hottest and from the darkest, such as cave entrances, to the most well-lit, such as open savannas.

Knowing botany

"It is important to have botanical knowledge of the plant species according to their native environment in order to select the right species for each project. Too often, you see side by side species originating from different types of environment, and some of them will not survive. Considering the climate evolution, we will face recurrent dryness and higher temperatures and this is accentuated in the big cities. We thus need more species to be able to thrive with these higher temperatures and dryness of the air, but hopefully there are many species that are able to grow both in horizontal and vertical situations, especially species from the central Deccan plateau in India," he said.

He also stressed on the importance of recycling excess water: "The advantage of a vertical garden is that only the useful water is absorbed by the roots of the plants, contrary to a horizontal garden, where most of the water is lost through superficial flowing and vertical percolation. Indoor vertical gardens are in the same environment all over the world, with a temperature of around 20 degree Celsius. During the hot months, indoor vertical gardens can reduce the need of climatisation, thanks to refreshing the air through leaf and substrate evaporation," he added.