

Nature on the Wall

How do you make the centre of a modern city more green? The French botanist Patrick Blanc simply grows plants on walls. His vertical gardens have astonished and delighted city dwellers around the world.

The 1,200km² façade of the Quai Branly Museum in Paris contains over 100 varieties of plants.

Every day, people stand on the banks of River Seine, looking up in wonder at the Quai Branly Museum in Paris. From dawn till dusk, the sound of shutters clicking and video cameras whirring fills the air. Many of these people have come here not to visit the wonderful ethnological museum designed by the architect Jean Nouvel; they are here to see the verdant wall that has become the most photographed façade of Paris in recent times.

Plant-covered walls are hardly revolutionary; everyone has heard about ivy. But what you see here isn't just a green curtain; it is a lush vertical landscape of cascading leaves, mossy gorges and oases, and tiny, colourful umbels growing under hanging branches.

It isn't just the bewildering variety that takes a while to get used to. You soon start to pick out well-known garden plants: ferns and hostas, holewort, lobelia, Irish moss and bergenias. The difference here is that, instead of looking down on them, you have to crane your neck up to see them from below.

The Paseo del Prado in Madrid houses the new CaixaForum Museum, much praised for its design by Swedish architects Jacques Herzog and Pierre de Meuron. It attracts sightseers who come to admire not the modern art but the living work of art that covers the six-storey exterior like a carpet. This 600-square-foot swathe of plants is woven together from thousands and thousands of bushes and shrubs—up to 300 different varieties.

So, how does one steal the limelight from world-famous architects and museums? It's easy. All you need is a metal frame, a PVC sheet, two layers of polyamide felt and an intricate sketch filled with scientific names of plants. The rest will be taken care of by a team of gardeners armed with seedlings, seeds, utility knives, staplers and glue.

However, for this to actually work, your name must be Patrick Blanc. The 59-year-old French botanist has created

over 160 such vertical gardens all around the world, most of them in big cities.

Soil: An Overrated Myth?

A house visit in Paris. It's a chilly, grey autumn day. The suburbs of Ivry-sur-Seine houses an old working-class neighbourhood with a gruff, multicultural charm, complete with a trucker's café and an Arabian takeaway. In the middle of carefully restored houses in the Rue de Châteaudun is a dilapidated building with boarded windows. One gets the feeling that this may be the wrong address.

The man who opens the gate sports a bright green quiff, is wearing a leaf-patterned shirt and has long fingernails. Dr Patrick Blanc is his own business card, and his house is his laboratory.

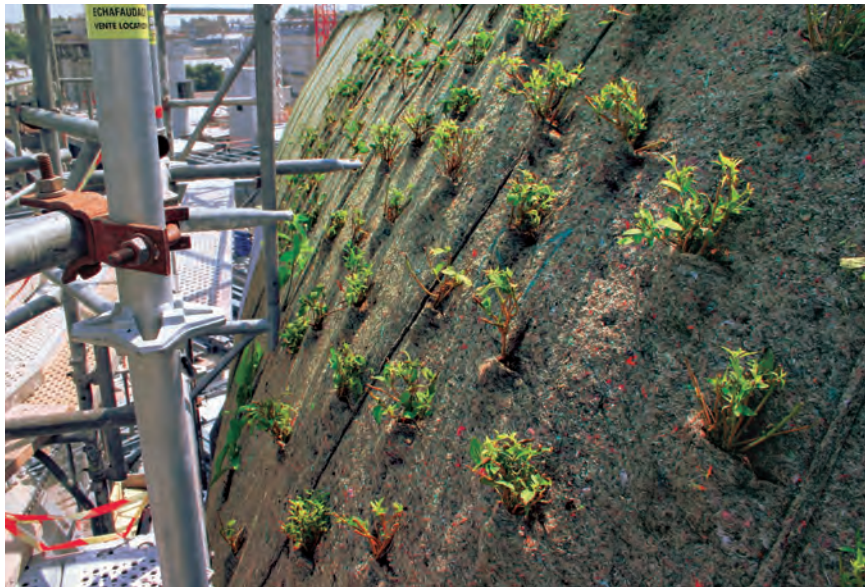
The patio wall is hidden behind huge disk-like leaves of Giant elephant-ear, serrated leaves of Japanese aralia and the dainty, saw-toothed foliage of boehmeria. The graceful blade-like leaves of Japanese iris can be seen high above on the wall and the fig trees look like they're touching the sky. This symphony of green patterns and shapes induces a reverential silence. The eyes involuntarily hunt for the ground from where the metre-thick plant beds have emerged, but in vain: there is

no sign of a single speck of earth or even a flowerpot. This seems to be a floating jungle surviving on air, water and light.

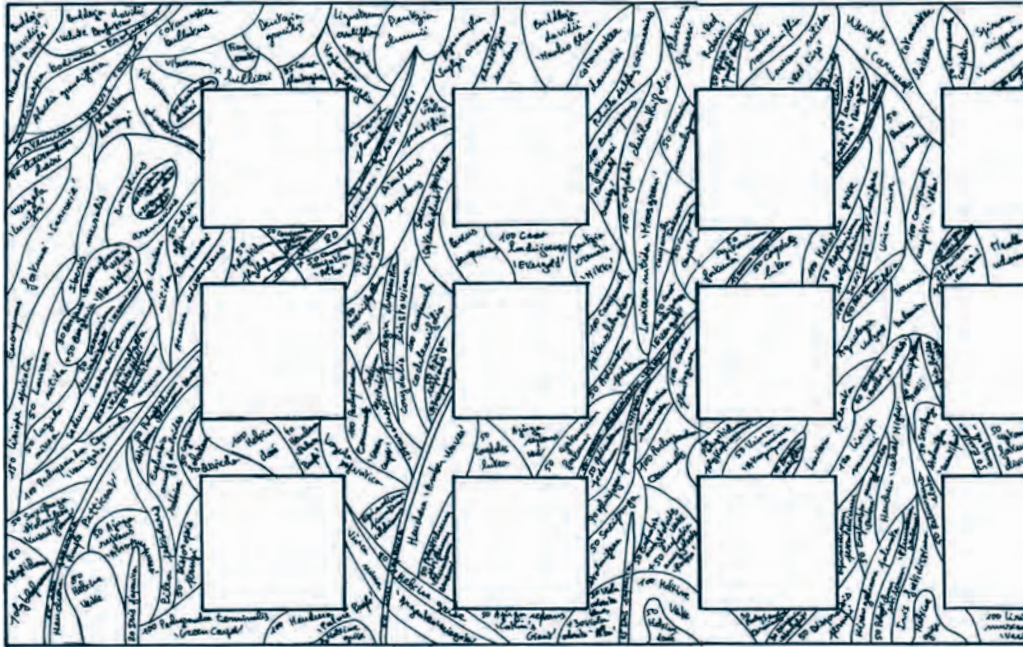
Patrick Blanc, who despite the cold is dressed in shorts and flipflops, explains the principle underlying his verdant walls: "Earth is overrated. Many plants don't need any soil. They grow equally well in polyamide felt as long as they get a daily dose of 5 litres of water per square metre."

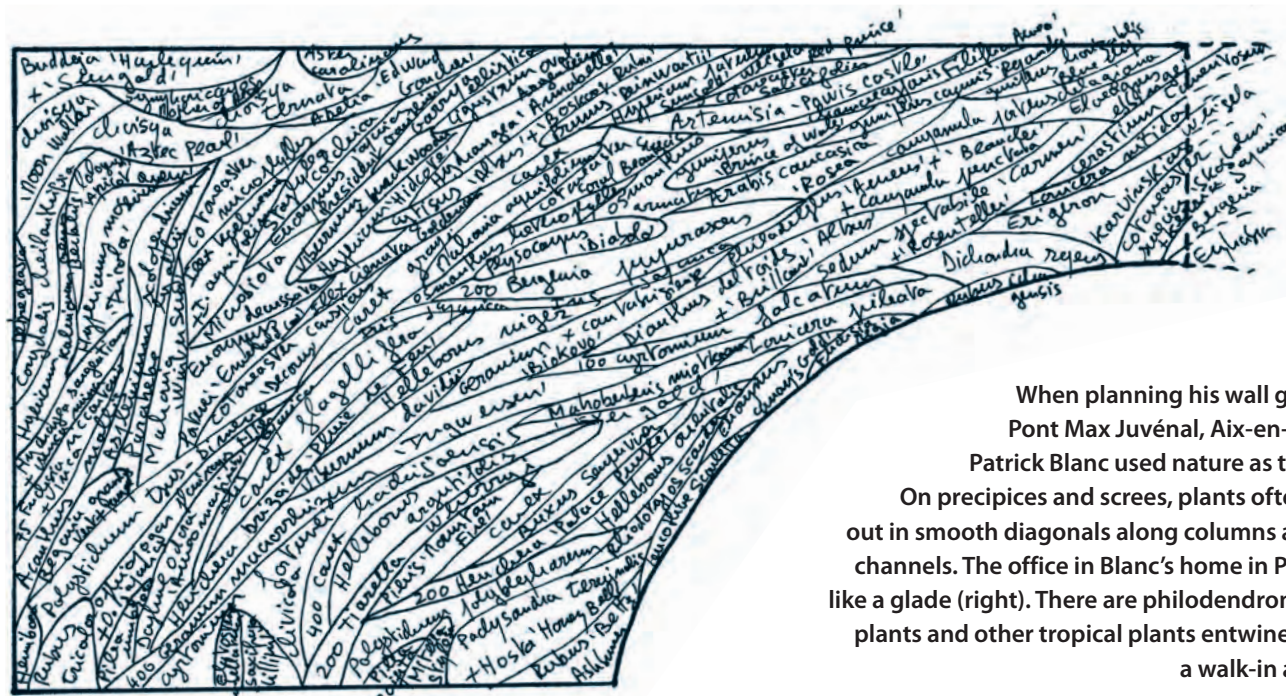
In Blanc's annexe, you stand, sit and walk on water. He and a friend bought this commercial plot 4 years ago. "The first thing we did was to dig out half a metre of earth and replace it with a 20,000-litre water tank. I have always dreamt of a walk-in aquarium." Now around 1,000 fish swim back and forth in the temperature-controlled water between the office and the patio. From the outside, the mega-aquarium is partially covered with wood and from the inside with reinforced glass so that Blanc can watch the shoals of startlingly colourful fish darting under his feet while he works on his computer.

Behind the writing table, an indoor jungle proliferates. For 30 years, tropical beauties have led the pampered existence of wallflowers in Blanc's house. In this living picture, which looks like a simple forest painting by Henri Rousseau, can



The search for suitable plants for his green walls called Blanc back to the wild again and again, like the Bukit Timah Nature Reserve in Singapore (above). For the planting of the Quai Branly Museum, he studied 10,000 pictures of plants to select those species that would flourish even on a north-facing wall. Each of his creations is first meticulously sketched out by hand.





When planning his wall gardens at Pont Max Juvénal, Aix-en-Provence, Patrick Blanc used nature as the model. On precipices and screes, plants often spread out in smooth diagonals along columns and water channels. The office in Blanc's home in Paris looks like a glade (right). There are philodendrons, Money plants and other tropical plants entwined around a walk-in aquarium.



be found dozens of varieties of small colourful birds buzzing and pecking. Blanc explains that birds like Estrildid finches and White-eyes are passionate pest-eaters and very graciously replace the insect spray. The aquarium also provides naturally fertilised water to nourish his plants.

Blanc has created this paradise in a very unlikely place on the outskirts of Paris. For the botanist, this isn't a decorative cliché, but an approach. "As a kid, I was always fascinated by the Garden of Eden because it thrived without any human intervention. Paradise was a self-regulated system of plants and animals, exactly like the jungle. I didn't much like the biblical story of the Fall, where man had to work by the sweat of his brow."

Blanc rolls his eyes every time someone calls him a gardener. He's an avid garden-despiser, and he can't stand the idyll of 'the countryside'—"pseudo nature" he calls it. "Gardens and parks bore me because I feel patronised there by the paths and straight lines that have been created by some well-meaning person. Besides, millions of modern city dwellers don't have any time to specially go to these places. It's much more desirable to step out of a metro and be greeted with a live green wall."

Blanc has not only worked with the creations of star architects, but has also used his pretty green packaging to

convert many other badly constructed everyday structures into attractions. Such as a metro station in Tiflis, a bridge in Aix-en-Provence, shopping centres, parking lots, public buildings, the hitherto shabby marketplace in Avignon and the previously grubby rue d'Alsace in the area around the main station in Paris.

Blanc pours himself a glass of wine and scatters a handful of freeze-dried crabs to the fish, explaining that it all began 40 years ago with these modest pets.

As a kid, he would use up all his pocket money on his aquarium, and would trade baby fish with Philippe Vallette, a neighbourhood friend. "When I was 15, I read something about the purification of aquarium water using the roots of indoor plants. Although I already knew the filtering effect of aquatic plants, I never thought this could work even with so-called normal ones." So, he cut a stem from his mother's philodendron and put it in the filter cartridge. Soon, it started sprouting roots and the fish started playing hide and seek around it.

It dawned on him then that everything that had been hammered into him in the school and church about the nourishing powers of the earth needed to be reinvestigated. "I said goodbye to water and immersed myself in the mysterious life of plants." Philippe Vallette, his childhood friend, on the other hand, stayed true to fish. He now

heads Nausicaá Aquarium, the National Sea Centre at Boulogne-sur-Mer.

Between the eye-opening experience in his childhood and the construction of his first green wall, there were many years of apprenticeship and countless hours of investigation and experimentation. Patrick Blanc studied biology, and when he turned 19, embarked on his first field trip to the rainforests of the Khao Yai National Park in Thailand. The flora overwhelmed him so much that his particular interest became not the giant trees but the epiphytes and the intricate diversity of the forest undergrowth.

From then on, he started travelling to all the major forests during his semester breaks. This was expensive and to supplement his budget he would sell ornamental fish at the department store Samaritaine on Saturdays. And in the evenings could often be found at the legendary Alcazar Cabaret. Even now, Blanc feels as at home in the nightclubs and bars of the urban jungle as in the forests: "They're both equally hot and humid, and populated with extraordinary and talented creatures."

Blanc graduated when he was 25 years old. His doctoral thesis was on plants of the tropical forest floor, which manage to grow with only around 1 per cent of the available sunlight: a principle that still comes in useful, since the bases of his living walls are frequently pitch-dark and sunless.

A Synthetic, and Hopefully Frost-free, Jungle

In Blanc's dorm room in college, a mini-jungle soon started to grow on a 2m-high wooden board. In the early days, growing a green wall proved tricky. The wooden frame would decay and crack, or a defective sprinkler would cause a flood. Blanc tried out coconut fibre, rock wool, moss and cotton cloth, but they would all rot very quickly. "In 1977, I finally gave up the idea that the plant support should be organic. As a botanist, this was not



easy for me, but it proved to be just the breakthrough I needed.”

On his field trips, Blanc had observed that thousands of plants grew on rocks, cliffs and karst that needed only water and a layer of humus just a few millimetres thick. He now decided to plant on synthetic fleece, the kind that is used in plant nurseries. Not only did this vertical jungle flourish, it was also easy to maintain. Blanc patented his invention in 1988.

In 1989, he qualified as a professor. Prior to this he had dedicated himself exclusively to tropical plants. “But one day, when a hideous new wall was constructed in front of my living room, I realised that I needed to think about a frost-free evergreen wall.” He then started to immerse himself in studying the flora of the temperate zone.

The first outdoor green wall was created in 1991. Two years later, a friendly landscape architect took a look at it. Eric Ossart was one of the organisers of the International Garden Festival in Chaumont-sur-Loire, the most avant-garde garden festival on the continent. He urged Blanc to design a vertical garden for the 1994 show. Chaumont changed Blanc’s life. Architects, museum directors and city planners were very impressed with this imaginative botanist, and the media found the green-haired plant-guru marvellously photogenic.

The green hair originally had nothing to do with botany, but with love: “When I was 25 years old, I met the man of my life and we decided to colour our hair for fun. Pascal chose blue and I green. He got bored after 4 weeks, but I decided to stick with it.” As for the fingernails, “It is a homage to Edith Piaf,” he explains, “and I like the fact that I can decide what or whom to touch and what I prefer to keep at a distance.”

Pascal Héní is a musician, and Blanc introduces him by his nickname, Pascal of Bollywood, “the most famous Frenchman in India.” Héní is fluent in Hindi and Bengali, can even sing *La Vie*



The plant artist tends his plants and protects his fingers with extra-long nails.

en Rose in Hindi, and has been on a grand tour of India.

They are like two birds of paradise—charming, disarming and interdependent. The troubadour accompanies the scientist on almost all his trips, and the botanist writes lyrics for the singer.

The Desert Blooms with Water from the Air-conditioner

We meet Blanc again in Singapore. For several years now, Blanc has been spinning on an ever-increasing carousel of conferences. According to visionary architect Rem Koolhaas, “Ecology is the ornament of the 21st century,” and within architecture, urban landscaping is a booming industry that oscillates between the organic and the artistic.

There are 400 participants from 25 countries at the Skyrise Greenery Convention in Singapore. Under discussion are the fast-developing megacities, where rooftop gardens and skyscraper façades seem the only solution to the dearth of green space.

Unlike his peers, Blanc does not throw around words like ‘sustainability’, ‘ecology’ and ‘climate change’. He leads the audience around the world—from a shopping centre in Bangkok to the Brussels Parliament. Then he shows how he is way ahead of his competition. With his patented system, 1m² of plantation would weigh only 3kg, including the

water content: using other procedures, it would weigh at least 20kg.

Blanc won’t be creating just green walls for very long. He plans to go horizontal with both his recent mammoth projects, the Miami Art Museum by Herzog and de Meuron, as well as a 65,000km² shopping centre in Dubai. His sketches show massive gardens over pedestrian paths, which look like plants in the sky. Blanc has a ready answer for sceptical ecologists: it will be irrigated exclusively with recycled water from air-conditioners. He concludes, “If you do it right, you can keep it all natural.”

One might assume that behind all this is a big office. But Blanc actually works alone, lovingly drawing each plan himself. He first visits the place that is in need of beautification and checks out the local climate. Then he goes through his archives—one digital, the other in his head—and rattles off thousands of Latin names of plants from sunny, chilly or tropical locations at the drop of a hat.

Most of his designs feature dynamic diagonals; after 2 to 3 years, the planting work looks as if a cornucopia of flowers and leaves has been scattered from the top right. Even smaller works include 100 different varieties, partly because this biodiversity keeps plant diseases and pests at bay.

Each of his works is unique. The rust-red tones of the garden in the CaixaForum Museum complements the rusted metal tones of the original building. In Kanazawa, near the museum of contemporary art, he collected seeds of wild herbs and planted them to provide a contrast to the brilliant flora.

Matthias Jenny, director of the Palmengarten in Frankfurt, insisted that Blanc create the world’s longest vertical garden for him along the 600m perimeter fence. Everyone agrees that Patrick Blanc’s work is the botanical creation of the century. Why? Jenny, who is a botanist himself, says: “Because one knows that for Blanc, plants are not just for decoration, he actually understands them.” ■

Blanc feels that to experience plants, one must touch them. Though some of his projects have limited accessibility—like the tropical ambience in the exclusive Ken Club in Paris (right)—there are other bigger outdoor ones that everyone can see and sometimes also touch—like the wall of the CaixaForum Museum in Madrid.

