PERSHING HALL, above left, is located in a Second Empire Paris townhouse that was formerly home to the American Legion. The small Andrée Putman-designed hotel opened in 2001; Blanc's living wall flourishes above the courtyard.

MOST OF ALL Patrick Blanc's intimate understanding of rain-forest botany shapes his living walls, as can be seen in another thriving project, above.

In a rain forest, trees grow tall, blocking out sunlight to the understorey plants below; yet, it is here that a wide range of plants grow in extraordinary places: Whether clinging to a rocky outcrop or growing from a host trunk, plants find a way to survive. These survival techniques are Blanc's inspiration. "When I was young, I kept tropical fish," he says. "At 12, I started growing aquatic plants, and then, at 15, aerial plants." Early on, Blanc learned that a plant does not always need a purely soil-based growing medium in order to thrive; with the necessary nutrient formula, it can grow in an inert substance. In the case of his living walls, the substance is a stiff, thin blanket of synthetic felt. The growing method is based on the principles of hydroponics: A watering system releases a diluted nutrient mix into the felt, in which the young seedlings or cuttings have been implanted. The felt is backed by a thin layer of pvc, to protect the integrity of the existing wall. As the plants grow into the felt, their roots make it stronger.

But it is not just the botanical side of Blanc's work that is worthy of note. What his creations hint at is a new architectural discourse, encouraging designers to challenge their preconceptions and look at new ways of working with plant material. The 50-year-old scientist frequently collaborates with architects and describes his role as the "one who conceives of projects dealing with botanical problems." From museums and exhibitions to private residences and public buildings, green walls under Blanc's control take a variety of shapes, sizes and aesthetic directions. As with many successful inventions, his first *mur végétal* was at his own home in Créteil, just outside Paris, in 1994. Here he covered 60 square metres with primarily hardy plants. Mimicking the rain forest, the sun-loving plants are found at the top, creating natural shade over the lower area, where ferns, saxifrages and small irises grow. In the same year, Blanc took his concept to the International Festival of Gardens at Chaumont-sur-Loire, France, where his living wall still thrives today.

One of his highest-profile schemes to date is at Pershing Hall, off the Champs Elysées in Paris. Designed by Andrée Putman, the upscale hotel features a courtyard dominated by one of Blanc's walls: There, layer upon layer of vegetation grows in happy profusion, as if growing vertically were the most natural thing in the world. Initially astonishing (just why are those plants thriving in such an odd place?) and exciting, the living, breathing plant material is also comforting and its familiarity, welcome – especially when it stands up to (and in many cases surpasses) the architecture supporting it.

Patrick Blanc's living walls expand the possibilities of his own discipline, while also presenting new options to landscape designers and architects. Incorporating species more often associated with standard landscape planting (such as buddleia, spirea and various willows), living walls introduce a fourth dimension – time/growth – to disciplines more accustomed to dealing with just three. Work such as Blanc's expands the design palette and gives architects new scope to create better environments for human beings. A

PHOTO (TOP LEFT ONLY) BY DIDIER BOISSAS

TECHNICAL CONSIDERATIONS

Blanc's work should not be seen as architectural vandalism; the technical requirements of living walls, despite their size, do not compromise the underlying structure.

KEY ISSUES TO CONSIDER:

- The ultimate weight of the living wall. When the synthetic felt is wet, its weight increases. Additionally, as the plants grow, their weight will increase. Be sure the supporting wall can cope;
- A damp-proof layer between the existing wall and the growing membrane is essential to prevent seepage;
- The hydroponic watering system must be installed correctly and be accessible for repairs;
- An awareness of the natural habitats of plants being used is needed to ensure proper placement.