Jungle

The rhythmic croaking of tree frogs filters through the steamy stillness. Whistles of exotic birds pierce the air. A formal balustrade and an eroded staircase emerge from the creeping vegetation, suggesting that a great plantation once dominated these lush surroundings. Water courses over a ruined terrace. The stately royal palms (*Roystonea regia*) that once led towards the entrance of the estate are now engulfed by other plants. The jungle is reclaiming its domain.

The Jungle, displaying plants from the world's lowland tropical rain forests, is conceived as a metaphor for the global clash between humans and nature. Left undisturbed, the forest will eventually overtake the abandoned plantation, covering over all traces of human habitation. This is a particularly poignant message today, as the loss of rain forest habitat due to deforestation is dramatic and widespread. Tropical rain forests contain the most diverse and ecologically complex plant communities. The sheer numbers of plants, their unusual adaptations, the rarity of species, and the complex relationships that form among plants and between plants and animals make the rain forest community an unusual and important natural system. One of the great challenges of the twenty-first century will be to discover how to live in harmony with nature so that human needs are met without destroying the ecosystems on which they depend. Choices will be presented, and there will be times when sites of exploitation will have to be abandoned to let nature recover.

Wandering through the dense greenery of the Jungle reveals a tangle of foliage in an amazing variety of sizes, shapes, and textures. The rain forest is an environment that encompasses four basic layers—a floor of exposed roots, seedlings, and debris; an understory of stunted trees and shrubs; a high canopy of trees and vines that intercepts most of the sunlight; and the tallest trees emerging from the dense canopy to reach the light. Different

(above)
Jungle vines twine around the formal balustrade.

(opposite)
Mist rises from a waterfall in the Jungle.

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(above)
Bromeliads.

(opposite)
Palm leaf (*Licuala ramsayi*).
Light changes continuously in the Jungle, spotlighting the tropical foliage and creating dramatic shadows in the undergrowth.

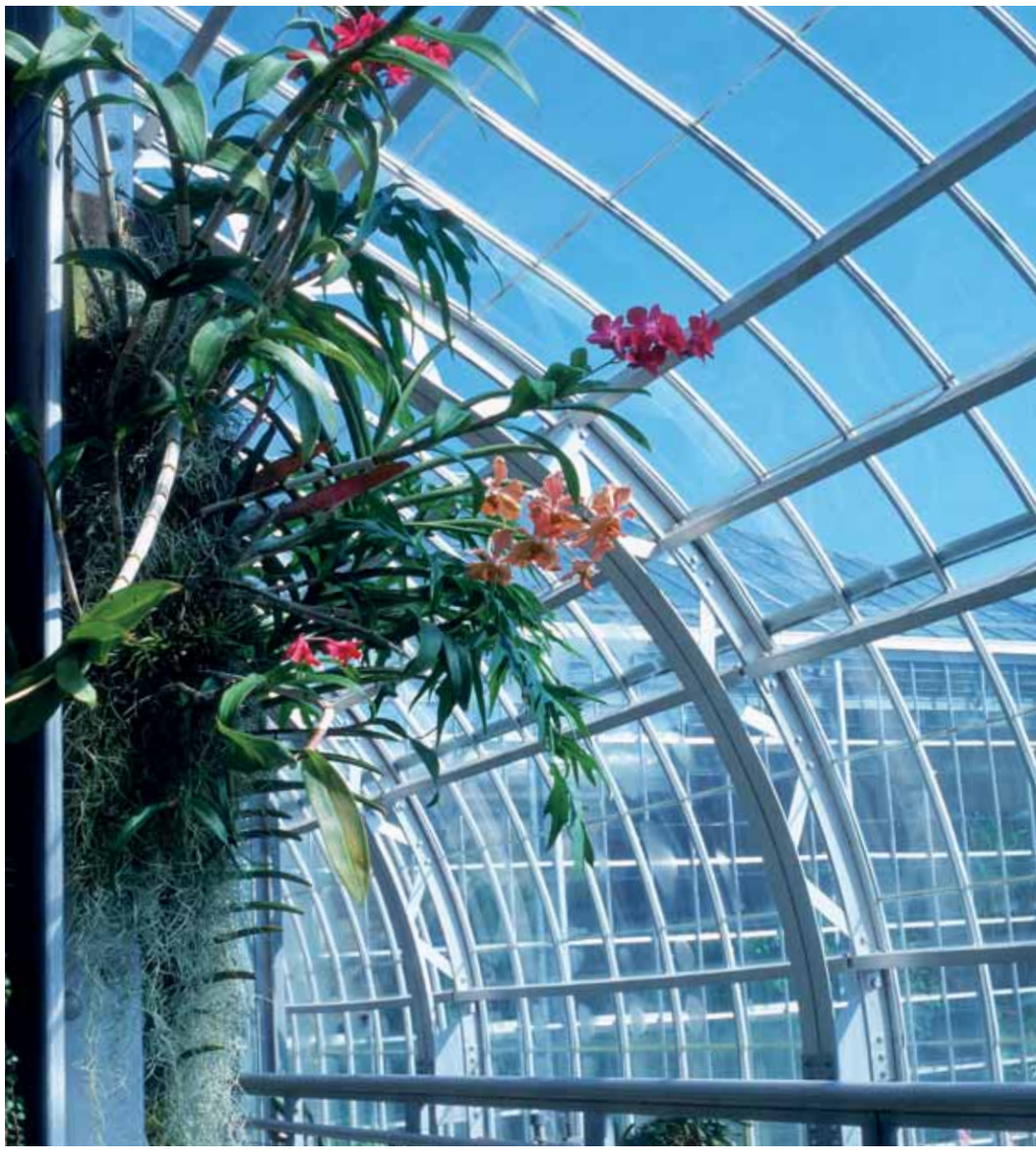
species of plants and plants in different stages of growth exist at the various levels. Each layer has a distinct microclimate creating survival challenges for the plants that exist there. Competition for water, light, and nutrients results in interesting adaptations, and many of these are on display. For instance, gigantic leaves like those of the elephant ear (*Alocasia* 'Calodora') take in more light in the deep shade, while the elongated drip tips at the ends of the leaves of the sacred fig (*Ficus religiosa*) move water efficiently to inhibit rot. Overlapping segments on the trunk of the traveler's tree (*Ravenala madagascariensis*) allow it to store water. The "chewed" appearance of the window leaf vine (*Monstera obliqua*) discourages insects from feasting on the leaves. Buttressed roots of the philodendrons and aerial roots of the many epiphytes allow these plants to absorb moisture efficiently. High overhead, the parasol leaves of the snakewood (*Cecropia peltata*), a fast-growing but weak-wooded tree, reach for the sunlight above the jungle canopy.

Distinct patterns, subtle colors, and suprising textures emerge from the misty atmosphere in the Jungle. The bright green branches of the vessel fern (*Angiopteris evecta*), believed to be a division of the original plant brought from New Zealand by the U.S. Exploring Expedition in 1842, form lacy shadows in the undergrowth. Meandering paths are lined with a dozen species of prayer plants (*Ctenanthe* spp.), whose leaves look hand-painted with delicate designs. Trunks of palms and cycads reveal unexpected textures, including the velvet brown fuzz of the teddy bear palm (*Dypsis lastelliana*), the porcupine spikes of a Mexican palm (*Astrocaryum mexicanum*), the twisted weave of the zombie palm (*Zombia antillarum*), and the knobby protrusions of a sago palm (*Cycas circinalis*). In the understory, showy orchids, delicate gingers, and heart-shaped anthuriums contribute splashes of vivid color that stand out against the tropical foliage.

(ABOVE AND CENTER)

JUNGLE VISTAS.

Visitors enjoy losing themselves in the luxurious foliage of the tropical rain forest. Overlooking the trickling stream and tucked in quiet corners, benches provide welcome stopping points for observation and contemplation.
A canopy walkway circles high above, allowing a monkey's-eye view of the treetops, as well as close inspection of flowering vines and epiphytes. From the heights, visitors can look out on striking vistas of the Mall and the U.S. Capitol.



(above)

Epiphytic orchids.

Epiphytes such as these orchids are aerial acrobats, anchoring high in trees but taking nothing from their hosts. The roots of epiphytes have a special coating that absorbs moisture from the air, allowing them to thrive where there is no soil. By establishing themselves in lofty perches, epiphytes can compete for light and nutrients in the crowded tropical forest.

(above)
Capitol dome visible from the Jungle canopy walkway.

(center)
Viewed from above, jungle foliage engulfs the abandoned plantation.

(above)
Water flows through the center of the Jungle.

(above left and opposite)

Prayer plants.

Leaves of the prayer plants are among the most colorful and distinct of the rain forest. Their intricate patterns are actually a deterrent to insects. The darker splotches look like leaves on top of lighter leaves, confusing an insect into eating only a small portion instead of destroying the entire plant. The deep purple or maroon underside of each leaf enhances energy absorption—the pigments are attuned to the altered spectrum of the forest floor.

(above right and right)

Vines.

The Rangoon creeper (*Quisqualis indica*) and the window leaf vine (*Monstera obliqua*) are typical of the plants that turn trees into crowded habitats. The dense growth of intertwining vines forms a self-supporting vertical column that does not require deep, anchoring roots, giving access to light and water. In combination with epiphytes, vines create elevated ecosystems where insects and other animals thrive above the forest floor.

(left and above)

Tropical flowers.

Flowers in unusual shapes and every imaginable hue populate the Jungle. Blue ginger (*Dichorisandra thyrsifolia*), yellow lollipops (*Pachystachys lutea*), and deep orange pagoda flower (*Clerodendrum splendens*) are among the colorful blossoms hidden in the tropical foliage.

(opposite)

Strangler fig (*Ficus aurea*).

The dark, rounded leaves of the strangler fig protrude from the slim fronds of a palm. A vine with a macabre twist, the strangler fig is well adapted to the competitive crush of the tropical rain forest. Seeds often germinate in the crowns of trees, where they have been deposited by birds. Once established, a vine gradually makes its way down the side of a tree, anchors into the soil, and begins to twist and spread around the trunk, eventually strangling its host.

Survival strategies.

Color, size, pattern, and texture all contribute to the survival of plants in the tropical rain forest.