

Trees of Buenos Aires Changing the Appearance of the City

Maria Luisa Musso

School of Architecture, Design and Urbanism, University of Buenos Aires, Argentina

Abstract: The color of a city is not limited to the inherent color of the facades of their buildings. It must be considered the perceived color in all its complexity and all the elements which form the urban landscape, as buildings, equipment, trees. With regard to vegetation, important areas of Buenos Aires show modified the appearance by the trees in different seasons of the year. These sections refer only to the trees that produce changes in the appearance.

Key words: ornamental trees, trees and ecosystem, Charles Thays, visual appearance

1. Introduction

Buenos Aires is well known for the cultural value of its trees, part of the urban ecosystem intimately related to the inhabitants life. They grow for the ornamentation of our public spaces and for shade and shelter, differing in size, shape and color, but also by the texture of their trunks and branches, the color of its leaves and flowers According to recent studies, in the streets and squares of Buenos Aires there are more than 423.000 trees, equivalent to one tree every seven inhabitants, when the World Health Organization recommends one every three people in a city, in order to improve air quality.

Census data say there are 51.740 trees in parks and squares and 372.625 on sidewalks. The goal is to reach 100.00 in green spaces and 420,000 in sidewalks. Aesthetic benefits of trees relate to the possibility to see colors, structures, shapes and densities. Most of this aesthetic experience is subjective, and impacts on mental and emotional states of people [1]. Color is initially is a physical

effect, but in sensitive people communicate immediately with the senses [2]. The visual appearance is that perception and, in many cases, knowledge through which an object is characterized or recognized as having attributes such as size, shape, color, texture, shine, translucency, opacity [3].

2. Some History

In the city of Buenos Aires, throughout history, tree growing data has been fragmentary from the colonial period. The first street of Buenos Aires was just a street with ombú trees, alongside the river. Until 1885 development in streets and squares was scarce and related to the initiatives of the inhabitants. In those days there were about 1,100 units in the city. During the presidency of Domingo Faustino Sarmiento (1868-1874) the trend of planting trees starts as a constant.

By the second half of the nineteenth century Buenos Aires incorporated the idea of green as a healthy city model under an organic notion of urbanism. "The city was considered as living organism breathing through the vegetation, promoting the quality of life of its inhabitants," said Graciela Benito, curator of the Botanical Garden. This view

Corresponding author: Maria Luisa Musso, Architect, Consulting Professor, research areas/interests: colour research program. E-mail: colormlm@gmail.com.

prevailed in the planning of the Buenos Aires public spaces, where the landscape interventions were enhanced by the city's Directorate of Parks & Walkways. The architect Charles Thays and agronomist Benito Carrasco, between 1891 and 1918 drew up the guiding principles of this work, which not only looked the aesthetic, but also hygiene, leisure and population expansion. The French architect Jules Charles Thays arrived in Argentina in 1889, to design Sarmiento Park in Córdoba. He became captivated by the young country and decided to spend the rest of his life in Argentina. He was named the city's Director of Parks & Walkways in 1891. At the Competition to qualify in this position wrote: "Man, especially one that works, has need of distraction. There is something healthier, noble, true, that in contemplation of trees, beautiful flowers, when they are ordered with taste? The spirit then rests, and the appearance of beauty, purity, produces an immediate effect on the heart" [4].

This position gave him significant influence over the design of the city's open spaces, and his legacy is still strongly felt in the city's open spaces today. Thays worked most extensively in Buenos Aires precisely at a period where the city was growing extremely fast as a result of immigration, especially from Spain and Italy. He traveled around the country looking for species that would serve to decorate streets, parks and squares. From the north and northeast of Argentina brought several species as Pink Lapacho, Floss-Silk Tree, Tipa tree and Jacaranda, including some exotic ones.

3. Trees of Buenos Aires

Lapacho, *Tabebuia avellaneda*, or Pink Lapacho (Fig. 1), (*Family Bignoniaceae*), is a native tree of America, distributed from northern Mexico to northern Argentina, naturally found in the wild of Central to South American forests. It is widely planted as ornamental tree in public squares and boulevards due to its impressive and colorful appearance of its magenta flowers. Its corolla is pink or magenta, though

exceptionally seen white. As soon initiated the spring in Buenos Aires, as an announcer of that, still without foliage, the tree spreads its thousands of pink flowers that dazzles with its extraordinary beauty. Flowering season is in early spring, in September, before the new leaves appear, but the ephemeral spectacle lasts only a few days. (ref. NCS S1040-R30B)*

Palo Borracho, (drunk sticks), *Chorisia speciosa* or Floss-Silk Tree (Fig. 2) (*Family Bombacaceae*) is a deciduous tree native to Argentina and Brazil [5]. It grows fast when water is abundant, and sometimes reaches up to 25 meters in height, with broad crown, hemispheric. Its trunk is bottle-shaped, generally bulging in its lower third, measuring up to 2 meters in girth. It is studded with thick conical prickles. It bloom



Fig. 1 Lapacho, *Tabebuia avellaneda*.



Fig. 2 Palo Borracho, *Chorisia speciosa*.

in December, lasting to May or more, there are specimens that bloom early as October. The pink flowers, solitary, very showy, open before the leaves show and then remain for a long period. It is a very special tree. In autumn some keep their flowers and others already have their fruits, very big caplets in green color. Decorative species are in all its stages, for their flowers and for their fruits. When they open show the silky whitecotton, which surrounds the seeds. (ref.NCS S0540-R30B)*.

The *Chorisia insignis* is the variety with cream white flowers (ref. NCS S0505-Y)*

Paraiso, *Melia azedarach*, (Family *Meliaceae*), commonly called “paradise” in our country, is a deciduous tree, in the mahogany family. This tree, well known as Persian lilac, is native to India and Pakistan but is now grown in all the warmer parts of the world. It that can reach a height of 20 to 40 meters. Flowers are showy, fragrant, numerous on slender stalks, white to lilac in color. In winter, no leaves remain, just these “China Berries” fruit, small, yellow, olive-like drupe, in cluster that are also very ornamental (Fig. 3) (ref. flower NCS S1020-R80B, fruit S1020-Y20R)*

Tipa tree, *Tipuana tipu* (Fig. 4) known as Rosewood, is a South American tree that can reach 40

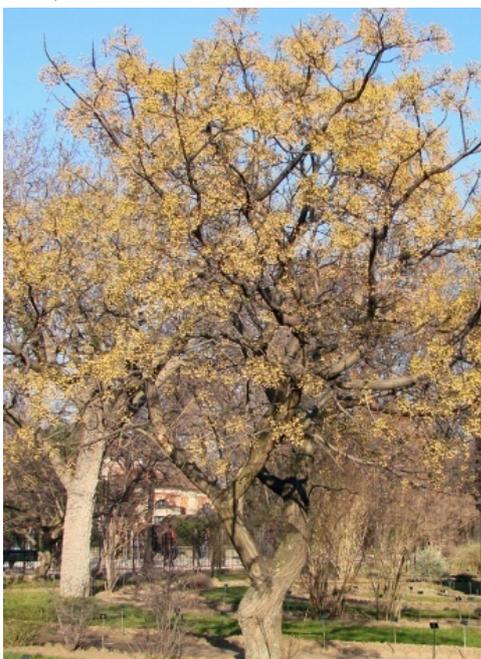


Fig. 3 Paraiso, *Melia A. Fruits*.



Fig. 4 Tipa, *Tipuana tipu*.

meters high, providing shade and cooling effect in the summer heat. Notable for his size and elegance of the port, it is one of the most conspicuous and well known

trees of our flora. Very parasol like shaped and highly branched. It is appreciate also for its magnificent blooming yellow. They bloom only briefly in December when the yellow of the flowers mix with the green of the leaves, and upholster then with gold, the lawns, driveways and sidewalks. They are also called “the daughters of Thays” because before this landscape architect started to redesign the green areas in Buenos Aires, there were only 3 of them. He recommended the use of this tree in the city and now it is found everywhere. Tipa tree line many of the broad avenues where they grow in their normal development, spreading their branches, that meet in the middle, making us imagine within a green cathedral with high vaults. In winter, when they lose their leaves the strength of his bearing is shown (ref. NCS S1060-Y10R)*.

Jacaranda, *Jacaranda mimosifolia* (Fig. 5), a sub-tropical tree native to South America that has been widely planted because of its beautiful and long-lasting blue flowers in bloom all over the city. The flowers appear in spring and early summer, before the new leaves appear, and last for up to two months or more. There are more than 11.000 trees in the city and continue to be planting. The profuse flowering of these trees grace the plazas, parks, lines the major avenues. You can't avoid finding yourself with jacarandas wherever you may be.” People are aware of the benefits they receive from this beautiful gift of colour” [6]. The foliage, green, is resembling a set of tenuous feathers. In winter, when it loses its leaves, fruits, large flat caps, decorate the branches (ref. NCS S1040-R70B)*.

Fresno Americano, White Ash, *Fraxinus Americana* (Fig. 6), is a tree from the temperate forests of North America, Asia and Europe. Tree providing a good and cool shade, reaches 15-20 m in height. The foliage, glossy green turns to bright yellow in autumn. The Fresno female have fruits provided with a wing, forming abundant clusters, that is green in spring and brown in autumn. The Fresno male is heavy, very green and robust tree. Unlike the female, not loading seeds



Fig. 5 *Jacaranda*, *Jacaranda m.* and *Jacarandas* in the City.

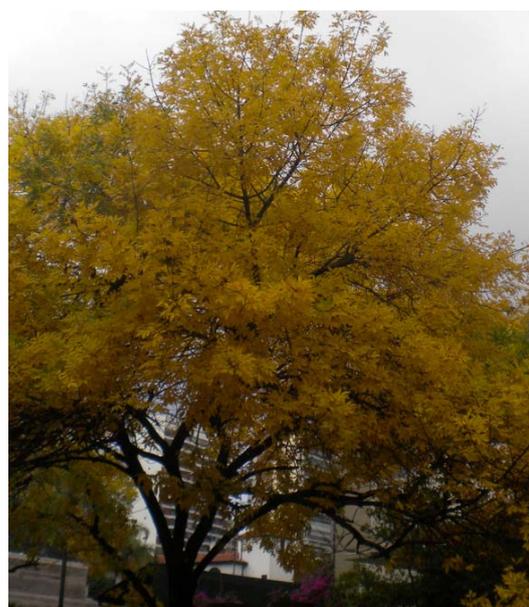


Fig. 6 *Fresno Americano Fraxinus A.*

and cup has twice the size. It is the species with the largest presence in the streets of the city, with more than 143.000 trees (ref. NCS S1060-10R)*.

Liquidambar, *Lyquidambar styraciflua* (Fig. 7) is a tree from Southern USA, Mexico and Guatemala, reaching 8 to 15 meters in height. Liquidambar comes from liquid and amber, alluding to the aromatic resin obtained from its bark. The leaves have five to seven lobules sharp; the upper side is bright dark green and the lower, clearer. In autumn they turn yellow to red and burgundy coloring the streets. The fruit is a spherical pendulum 2.5 to 4 cm in diameter and with numerous (20 to 50) capsules and each capsule is still open in the tree when the seeds are dispersed.

Platano, *Platanus acerifolia* (Fig. 8), it is considered a hybrid between two species: *Platanus orientalis* of Eurasian origin and *Platanus occidentalis*, of American origin. It is a deciduous tree that can reach above 40 meters high, providing a dense shade. There



Fig. 7 Liquidambar, *Lyquidambar s.*



Fig. 8 Plátano, *Platanus*.

are about 35.00 trees in the streets. The crust is light grayish-brown color. Subsequently, very thin laminas come off leaving spots of lighter color. The large leaves are arranged alternately, green, lighter and pubescent underside fixing atmospheric dust particles, so that their action is significant decontaminant. The fruits are small and numerous, globular, hanging from long stalks and have a size close to 4 cm in diameter but the pollen from its fruits produces allergies. Its bright green foliage turns yellowish and then to light brown in autumn and loses its leaves in winter.

4. Conclusions

Buenos Aires is a green City. It is very impressive how the color of flowers, leaves, trunks and its branches modifies the urban environment in different seasons of the year. There is a sense on the need to enjoy the color in nature that surrounds us, even in a big city like Buenos Aires.

The ornamental aspect is given by numerous features that together or separately, put the total value of ornamental plant, those who predominate in the

appreciation of this character are the colorful leaves and flowers and in some cases the trunks and in others the fruits.

Acknowledgements

*The NCS colours mentioned are only referential. The colour that we perceive is influenced by the intensity, angle and composition of the illumination, by the surrounding colours and by other factors that vary with the situation as for instance date and time. Colours perceived in complex situations depend on many other things than the physical radiation and the reflection qualities of the surface (Fridell Anter 1996/Gibson 1966). In the case of these flowers, differs also from flower to flower, from tree to tree of the same species, the site where they grow.

References

- [1] L. Tyrväinen, S. Pauleit, K. Seeland and S. de Vries, *Benefits and Uses of Urban Forests and Trees, chapter 4 in Urban Forests and Trees*, Berlin. Springer, 2005.
- [2] W. Kandinsky, *On the Spiritual in Art*, New York: Hilla Rebay Editor, published by the Solomon R. Guggenheim Foundation, 1946.
- [3] D. Lozano, *La apariencia Visual y su medicion*, Buenos Aires, Editorial Dunken, 2015.
- [4] S. Berjman, *Carlos Thays: sus escritos sobre jardines y paisajes*, Buenos Aires, 2002.
- [5] C. Dalgas Frisch, *The Hummingbird Garden*, Sao Paulo, 1995.
- [6] I. Messore, *Haciendo verde Buenos Aires*, El libro verde, Buenos Aires, Editors I C.Conte-706114, 2011.