

## **HEADING REPORT(H)A: The theatre of nature and the world**

### **THE ‘CARIOCA’ MOUNTAIN RANGES AND ITS MULTIPLE STORIES ILLUSTRATED BY THE FOREST OF TIJUCA, RIO DE JANEIRO, BRAZIL**

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**Tijuca Forest: view of ‘Pedra da Gávea’ from ‘Vista do Almirante’.  
Photographic record of Gabriel Paes da Silva Sales made on October 20, 2018.**

The idyllic landscape of the city of Rio de Janeiro, Brazil, portrayed by the chroniclers and naturalists who arrived there since the 16th century, it’s grounded by the encounter between the sea and the green mountains that draw its coastline. The upright wall of the Tijuca massif, sighted from Guanabara Bay, has been a border since the Portuguese Colony settlement, changing over time by the different uses of the soil. The dense and

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evergreen forest, a thriving result of the Brazilian Atlantic Rain Forest regime, became a source of water, firewood, coal and coffee, among others, to supply the expanding urban area of the Colony, and, later, the Empire.

The scarcity of water, which resulted in a serious crisis for the city's water supply, was the result of the destruction of the springs by the deforestation process of the Tijuca massif in order to implement coffee production. Starting in 1862, and for more than 150 years, the pioneer reforestation project of the so-called Forest of Tijuca (Floresta de Tijuca), under the leadership of the enigmatic figure of Major Manoel Gomes Archer, was justified by that crisis.

Floresta da Tijuca is recognized as one of the largest urban forests in the world and its trees a historicity register beyond biological evolution. The understanding of this Forest not just as a consequence of biological interactions, allows to resize the trajectory of the Tijuca Forest as a product of the human intentions. That is, from the indigenous people management to the forest diversity resulting from the plantations initiated by Major Archer and finally the randomness of natural processes that took the seeds of such forest species beyond the territories established in the original reforestation project.

How many stories will the trees that adorns the landscape of Rio de Janeiro tell? The different documentary sources, reports, letters, sketches and cartograms, and other historical sources are true evidences of the present forest and a way to understand its past. Thus, the planting lists, conducted by Archer and his successors, presented the selected botanical species, some by their scientific names and others species by their popular names.

Therefore, the data from the reports must be crossed with the origin of the seeds, in order to correlate the mentioned scientific names with the popular names. Then, it is necessary to make an inventory of the current forest species, measuring the largest individuals and collecting their branches in order to establish the identification and comparison with botanical collections deposited in the herbariums. Regarding this process, some questions immediately arises: are these individuals the same used in the 1862 reforestation process? If they are, in what specific place were they planted? Then, using historical cartography, maps and sketches, a recognition and comparison has to be made considering topographical levels and land property limits. Following, we must return to the fieldwork and search for ruins and other landmarks evidences that can define the planting area,

which was, until then, unknown. Once the area is identified, it is necessary to recognize the original forest plantation trees, dating its chronology.

Therefore, dendrochronology becomes the fundamental tool in this research stage. Counting the growth rings of the stem makes possible to assign the age of each tree comparing these live testimonies of the current forest with plantation reports. The spatial dimension approach, so fundamental for Geography, added by the biotic components study, in a long term complexity of temporal scales, constitutes a fertile ground for the interaction of methodologies that converge to an environmental history purpose around this valuable and pioneering reforestation project in Brazil Imperial that inaugurated the landscape restoration, as well as the development of silvicultural techniques.

#### References:

DEAN, Warren, *A ferro e fogo: a história e a devastação da Mata Atlântica brasileira*, First edition (São Paulo: Companhia das Letras, 1996).

DRUMMOND, José Augusto. 'O jardim dentro da máquina: breve história ambiental da Floresta da Tijuca', *Estudos Históricos* 1 (2) (1988): 276-298.

SALES, Gabriel Paes da Silva and GUEDES-BRUNI, Rejan R. 'Um quebra-cabeça verde: "montando as peças" do reflorestamento empreendido na Floresta da Tijuca', *Fronteiras: Journal of Social, Technological and Environmental Science* 7 (3) (2018): 58-77.

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