

## THE HISTORIC VEGETATION OF THE EUCLIDES DA CUNHA SQUARE

Joelmir Marques da Silva<sup>1 2</sup>

### ABSTRACT

In the 1930s, Roberto Burle Marx created the first modern public gardens in the city of Recife, Pernambuco State, Brazil. For Burle Marx, the design of a garden is a reintegration of the aesthetic components of the landscape in which vegetation is the main element. Burle Marx designed a set of 13 public gardens between 1935 and 1937, and among them, the Euclides da Cunha Square stands out for being one of the first projects. The square was restored in 2004 and due to its recognition as a historic garden, conservation actions have been implemented, requiring knowledge of historic vegetation that is characterized as an archaeological study of botany. This study investigated the problems arising from lack of understanding the historic vegetation of the Euclides da Cunha Square. We identified the original and current floristic composition of this square and compared it at different times to ensure that conservation actions achieve garden authenticity. We observed that despite of the interventions related to the vegetation of the original projects, the original idea of the Burle Marx has remained.

**Keywords:** Historic garden; Cultural heritage; Conservation; Recife.

## O VERDE HISTÓRICO DA PRAÇA EUCLIDES DA CUNHA

### RESUMO

Os primeiros jardins públicos, de caráter moderno, foram criados no Brasil por Roberto Burle Marx na década de 1930 na cidade do Recife. Para o paisagista o desenho de um jardim é uma reintegração estética dos elementos da paisagem envolvente onde a vegetação é o elemento principal. Com essa intenção Burle Marx projetou um conjunto de treze jardins públicos, entre 1935 a 1937 e, dentre eles, destaca-se Praça Euclides da Cunha por ser um dos seus primeiros projetos. Tendo sido restaurada em 2004, na perspectiva de seu reconhecimento como jardim histórico, ações de conservação vem sendo praticadas, o que exige o conhecimento do verde histórico o que se configura como um estudo da arqueologia botânica. O problema que caracteriza o presente artigo estabeleceu-se em torno da ausência de um entendimento do verde histórico da Praça Euclides da Cunha. Para tanto, objetivou-se identificar a composição florística do projeto original e a atual dessa praça bem como compará-las com vistas a garantir ações de conservação que concorrerá para a autenticidade. Observou-se que apesar das intervenções ocorridas com relação à vegetação indicada no projeto original, a ideia do paisagista permanece.

**Palavras-chaves:** Jardim histórico; Patrimônio Cultural; Conservação; Recife.

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## INTRODUCTION

The year 1935 marks a moment in the history of landscape architecture in the city of Recife, capital of Pernambuco State, Northeastern Brazil, with the arrival of the landscape architect Roberto Burle Marx, who was assigned for the Sector of Parks and Gardens of the Department of Architecture and Construction at the invitation of then-Governor Carlos de Lima Cavalcanti.

Major newspapers of the time covered the presence of Burle Marx in Recife and many times, he was regarded as the hope for a change in landscape of Recife, since Burle Marx designed “gardens and squares that the city needed to compose its own landscape and provide comfort, hygiene and beauty to its population without breaking lines and neglecting the sense of nature environment” (Diário da Tarde, March 14, 1935, p. 2).

The expectation was to have, with the constructions and/or renovations of gardens, a rational, regional, and modern orientation, since for Burle Marx “gardens are in their essence nature organized, subordinate to architectonic laws” (Diário da Manhã, May 5, 1935, p. 1). It is necessary that “men understand the elaborate landscape through a conscious ordering of nature. But we need to understand wild nature, non-elaborated, to learn from it a big lesson” (Marx in Cals, 1995, p.74).

Starting his activities in parks and gardens, Burle Marx creates a plan of embellishment and designs the first public gardens of his career, as is the case of the Euclides da Cunha Square, designed in 1935. In this project, the landscaper gives a autochthonous character to squares, gardens and

parks of Recife, integrating them to the urban landscape with plants that were in the vicinity, and often characterized the region. Burle Marx justified the use of *Acrocomia intumescens* in his projects and stated that “*Macaíba or Macaúba that, with its exuberant crown, well characterizes the landscape around Olinda and Recife*” (Marx, 1985, p. 71 in Seminar of Tropicology: man, earth and tropic, 1992). For Burle Marx, it was the way to sow the Brazilian soul in the gardens.

Hygiene, education, and art were the guiding principles that Burle Marx adopted when designing the gardens in Recife, where the botanic element became protagonist. Therefore, because they are unique documents, with their own personalities with many meanings, six public gardens, the most representative of a total of sixteen designed by Burle Marx, from 1935 to 1958, were inventoried by Laboratory of Landscape from the Federal University of Pernambuco. The objective was to request cultural protection, as a National Cultural Heritage, towards the Instituto do Patrimônio Histórico e Artístico Nacional (IPHAN), which was accomplished in 2008, and among which, the Euclides da Cunha Square.

The objective of this study was to identify the floristic composition of the original and current project of the Euclides da Cunha Square, as well as compare one to another to ensure that conservation actions fulfill the authenticity of the vegetation, since the square is considered a Historic Garden, that is, a living monument.

## MATERIAL AND METHODS

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## The object

The Euclides da Cunha square (Fig. 1) is located in the Madalena Neighborhood, Recife City, Pernambuco State, Brazil, and is one of the first public gardens designed by Roberto Burle Marx in 1935. The area where the square was part of the Engenho da Madalena that, at the time, was a

marshy depression that was covered with earth years later. Before Marx named it Euclides da Cunha Square, it was called Jardim do Benfica. Later it became Cactário da Madalena and Jardim das Cactáceas.

Figure 1. Euclides da Cunha Square in 2013.



## Methods

### *Historical Research*

According to Best (1972, p. 12-13), “*historical research describes what was*”. The process focuses on four aspects: i) research, ii) registration, iii) analysis, and iv) interpretation of past events. Descriptive research outlines what is. It also addresses four aspects: i) description, ii) registration, iii) analysis, and iv) interpretation of current phenomena, aiming at its functioning in the

present. The bibliographical research, in turn, refers to secondary sources, covering the entire bibliography ever published in relation to the subject of study, however, according to Trujillo (1974), it is not a mere repetition of what has already been said or written on the subject.

The historical research used the technique of indirect documentation, where data collection is

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restricted to documents written or not, comprising primary sources, which include i) daily newspapers, ii) journals, and iii) iconographies. The research in newspapers covered the timeframe from 1934 to 1937. These years were chosen because it was when Burle Marx produced many landscapes in Recife. We consulted the newspapers “Diário da Manhã”, “Diário da Tarde”, “Jornal do Commercio” and “Diario de Pernambuco”. The

#### *Descriptive research*

For the descriptive research, we used direct documentation as a technique, which consists of the on-site data collection (study area). These data can be obtained in two ways: (i) in the field, or ii) in the lab. We carried out a field study, which, according to Tripodi et al., (1975, p. 42-71) “*is divided into three major groups: (i) quantitative-descriptive, ii) exploratory, and iii) experimental*”. For the purpose of this study, only the first two groups were addressed.

The quantitative-descriptive study referred to the floristic survey of the square, in which we inventoried all individuals on the square. Taxonomic identification of the specimens was carried out on the spot only in case of very well-known species. For the others, we collected samples of fertile and herbaria botanical material for subsequent identification by experts and

#### *Literature Research*

For the literature research, and within the pertinent categories, we selected “publications” that

consultation of the newspapers allowed access to Burle Marx’s speeches that expressed his plans for the Euclides da Cunha Square.

About the iconographic material, photographic records were consulted the decades of 1940 and 1950; the Burle Marx’s drawings for the Euclides da Cunha Square and photographic records from the newspapers “Diário da Manhã” and “Diário da Tarde”.

comparisons with exsiccates of the UFP Herbarium – Geraldo Mariz da Universidade Federal de Pernambuco; the *Neotropical Herbarium Specimens*; the *Neotropical Live Plant Photos* and *TROPICOS®*. To characterize the vegetation, we prepared a floristic list according to the Cronquist classification system (1981) relating the families and species. Confirmation of names was obtained by consulting the species index through the site of the *Missouri Botanical Garden*, which resulted in the current inventory of the studied square.

For the field analysis of exploratory character, we used the exploratory-descriptive studies combined that aims to describe, to a certain extent, a given phenomenon, for example, a case study for which empirical and theoretical analyses will be performed.

encompassed books, dissertations, monographs, periodicals, papers, and research.

## RESULTS AND DISCUSSION

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## The Euclides da Cunha Square and its history

Burle Marx stated, “the novel ‘Os Sertões’ by Euclides da Cunha strongly influenced my decision to build the Cactário da Madalena” (MARX, 1987, p. 73). With the project of the Euclides da Cunha Square, the landscaper aimed to sow “the Brazilian soul”, however, evoking the “Brazility” at that time meant a structural opposition between the countryside and the city.

The novelist Euclides da Cunha in his literary work, *Os Sertões*, treats “Brazility” as the purity pegged to the hinterlands, once the coastal cities looked dark and promiscuous, which precluded the construction of the long sought-after “Brazility”. For Euclides da Cunha “the hinterland is a place of oblivion” (CUNHA, 1909, p. 111). This oblivion imposed by the country led to the conditions to “create” an original people who started to express the national soul.

In the landscape design of the Euclides da Cunha Square, Burle Marx used a unique climatic and botanical hitherto totally ignored – the Caatinga vegetation. Joaquin Cardozo stated that “in the garden of Largo do Benfica, besides the trees always well-chosen, bushes and cactus from the Caatinga were planted (...) to give residents of Recife a vision of the dry hinterland of their home state” (2009, p. 171).

The plants of the Caatinga assumed, at the time, an ambiguous position – native and exotic. Native, for being part of one of the most beautiful forest formations in Brazil, and exotic, for being so unknown and rejected by society (Figs. 2 and 3). Thus, the Euclides da Cunha Square constitutes today the only Brazilian public space with such characteristics.

Figures 2 and 3. Vegetation of the Caatinga on the Euclides da Cunha Square in 2013.



In addition to the social and geographical issue, “*Os Sertões*”, in its subsection entitled “*As Caatingas*” brings accurate information about the typical

vegetation of the region covering floristic, phytosociological, morphological, and ecophysiological aspects, as well as of the floral

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biology and plant-soil interaction by characterizing as a botanical compendium.

Analyzing the contents of the novel “*Os Sertões*” with the knowledge of ecology, especially with regard to ecological groups, obtained from the Dahlem Botanical Garden, in Germany, regarding the classification of botanist Adolf Engler, Burle Marx creates a garden, as he himself determined, of ecological character.

With the creation of the Euclides da Cunha Square, Burle Marx aims to “*donate to Pernambuco State a garden that conciliates hygiene and art, the pair of education and culture (...)*” (DIARIO DA TARDE, March 14, 1935 b, p. 1).

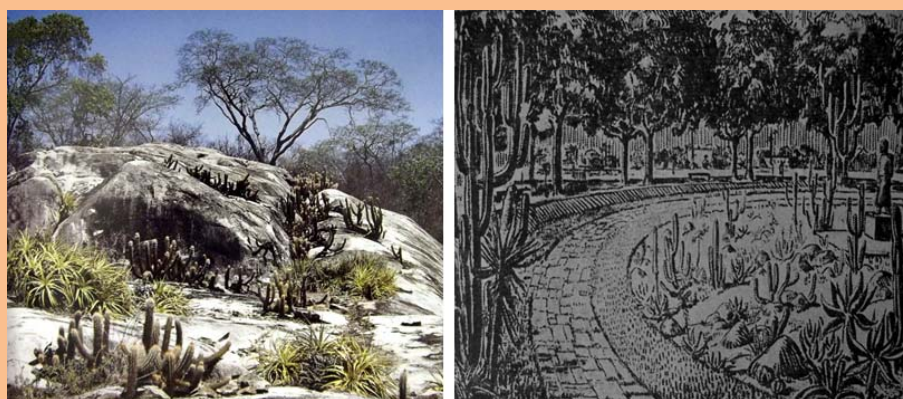
In the article “Gardens and Parks of Recife: Roberto Burle Marx for the Diário da Tarde” of March 14, 1935 b, the landscape designer exposes his intentions to the square, emphasizing the floristic composition, justifying the use of each species.

(...) We intend to create a cactario and put together the largest possible number of genres of Brazilian family of

Cactaceae such as *Cereus*, *Melocactus*, *Opuntia*, *Pilocereus*, etc. blocks of stone and plants of the families of the Bromeliaceae and Euforbiaceae will complete the northeastern environment. Two malls of trees from the hinterlands, such as Unbuzeiros, Joazeiros, Pãos d'Arco, etc., will surround the square by the outer part lying at one end where they will form a small cluster of trees. We will have access to the internal sidewalk through three small steps that will accompany a grass-covered ramp. Alongside these steps, there will be some examples of large cactuses.

Figure 4 shows a comparison between an area of the Caatinga in Ceará State with populations of macambira (*Encholirium spectabile*) and xiquexique (*Pilosocereus gounellei*) in back of a large rock outcropping in the inset of extensive savanna with the perspective drawing of the Euclides da Cunha square done by Burle Marx in 1935, where one can see clearly that the landscaper respected the environmental conditions of the species associated with the artistic issues of the garden.

Figure 4. (Left) Aspect of Caatinga in Ceará; (Right) Burle Marx's drawing for Euclides da Cunha Square.



Source: AB'SÁBER and MARIGO, 2006 (A) and Diário da Tarde, March 14, 1935b (B).

The Diário da Tarde showed some Burle Marx's drawings (Figs. 5 and 6), which display the artistic question, the ecological character of the garden

through the association between individuals of the same species and different species, as well as

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Marx's interaction with the mineral element, the rocks, representing, thus, the Caatinga landscape.

Figures 5 and 6. Burle Marx's drawing of Euclides da Cunha Square.



Source: Diário da Tarde, March 14, 1935b.

Some authors such as Euler Sandeville Jr. (2003) and Fabiano Oliveira (2008) reinforce that in addition to reading “*Os Sertões*” and the experience in the Dahlem Botanical Garden, another important moment was the contact that Burle Marx had with Mina Klabin Warchavchik, who designed from 1928 gardens tailored to Brazilian conditions.

In line with the discussions, the modernist landscape architect was interested in using tropical plants where the cactus appears loaded with symbolism and the gardens were considered, recurrently, the Brazilian modern architecture historiography as one of the major attempts to “Brazilization”.

However, Burle Marx's ideals clearly transcended those of Mina Warchavchik by adding cultural character of construction of new values and perception towards the northeastern landscape elements. The scientific question of focusing on botanical and environmental issues was something missing in the works of Mina Warchavchik (DOURADO, 2009).

The Euclides da Cunha square was, and still is, one of the most controversial projects that Burle Marx designed. Many residents of Recife, led by journalist Mario Melo, in the decade of 1930, reacted by understanding that a garden with such characteristics would be an attempt to return the city to the jungle.

The emphasis that Burle Marx placed on the use of Caatinga vegetation in Recife is based not only on its intrinsic landscape qualities, but above all, on adequacy of being native to the region and, according to Jacques Leenhardt:

The plants used come from the region, but they never had a right to citizenship in landscape practice of the season. The way of present them is crucial to the meaning that they have in the garden. Burle Marx will spread the Cactaceae collected in the Caatinga by himself in the middle of the rocks. They will appear as if each one of them carried, in their loneliness and shape, the memory of fighting for life they once had in the hostile environment where they grew up (2008, p. 42).

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Figure 7 shows a partial view of the square in early 1936 and, we emphasize, the size of the mandacaru (1) (*Cereus jamacaru*) that already had woody

phylloclade, which leads us to affirm that they were planted in the square in its adulthood, similar to some arboreal species in the Casa Forte Square.

Figure 7. Euclides da Cunha square. Detail of specimens of Cactaceae and Bromeliaceae.



Source: Diário da Manhã, Feb 16, 1936.

Creating a garden in a coastal area, where the edaphoclimatic conditions are entirely distinct from those in the region of the Caatinga vegetation, mainly Cactaceae, Burle Marx not only introduced the vegetation, but also established a correspondence between the conditions of the area that it occupies and its ecophysiological requirements. This was only possible because the landscaper aimed to understand the plant in its habitat, understand its associations, its importance, its phytosociological insertion in a natural scenic area (edaphoclimatic aspects), which are essential for a garden, even because for Burle Marx, creating a garden is also creating microclimates.

In his descriptions of the Euclides da Cunha Square and even in reports about the Caatinga, Burle Marx

described well this region. What draws attention is the way in which he groups the species on the square, taking into consideration their specificities, which reminds us clearly of the division used by rural people, that is, Caatinga conceived on two tracks of vegetation, two distinct types of landscape.

The classification is based on the moisture level, the coastal wild fields that have greater humidity for being closer to the sea with deeper soil, with taller and denser vegetation; and the hinterland, which is drier, with shallow and/or stony soil and lower and poor vegetation. The hinterland is the Caatinga in the usual sense of the word; it is the Caatinga itself, dry and aggressive.

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It is no surprise that the design of this garden essentially Brazilian, Euclides da Cunha Square, does not only emphasize the character of vegetation, but it also values a culture and popular knowledge, that is, the indigenous look. In the project, Burle Marx displays the arboreal vegetation with the function of protecting the central seedbed, represented mostly by Cactaceae, from coastal winds, since such vegetation does not withstand high humidity.

Towards the periphery-center of the garden, tree species characterized by hypoxerophytes were placed in the first ring that are adapted to moisture. After, another ring composed of tree species and shrubs, vegetation of transition, which has the

### **Botanical archeology of the Euclides da Cunha Square**

Archaeology is a social science discipline that studies the traces of cultural materials. At the end of the 20<sup>th</sup> century, the branch of archaeology is consolidated, called historical archaeology, which encompasses the investigation of remnants of the historical period.

The concept of historical archaeology offers few variations, usually perceived as a research field of multidisciplinary character that covers a wide range of sources of information, official data, diaries, letters, maps, plans, photographs, interviews, oral history, and traditional archaeological methods. Thus, it is characterized as the study of recent past through the trace materials, which contribute to the discovery of everyday life and the search to understand the historical development (ANDRADE, 2010).

From this perspective, the knowledge of botany, archeology, or historical botany, constitutes the basis for a correct understanding of a garden. In the most fortunate cases, documentary research can

function to absorb moisture that managed to overcome the vegetation of the first ring, thus allowing the cactus species to be moisture-free, in addition to receiving direct solar impact, since they are characterized as heliophytes (PAULA et al., 2011). With the use of two tree rows, Burle Marx values the garden center through the zenith lighting and creates a centripetal space (Dourado, 2000) and Mafra, 2007).

With the creation of the Euclides da Cunha Square, Burle Marx concretizes his objective exposed in the *Diário da Tarde* March 14, 1935, which was to give the state of Pernambuco, in terms of gardens, something solid and for prosperity, within an artistic, cultural, and common sense expression.

define the list of plants used in a particular place. It is important to know the botanical species grown in different historical periods, even if it is not possible to deepen the study on the historical aspect of the Botanical Garden (ONOFRE, 2002; DE ANGELIS and DE ANGELIS NETO, 2004).

Architect Saúl Alcántara Onofre, scholar of historical gardens of Mexico, highlights the importance of the thorough study of the vegetation as it allows several considerations about the past, about the present, and on the future of the garden. He also stresses that vegetation must be analyzed according to a historical method and highlights "*On the other hand, it is important to define how vegetation was displayed in the past and if it will alter along the time*" (ONOFRE, 2002, p. 28).

In complex cases, only the competence of a botanist or a specialized biologist may solve identification problems. The floristic survey is the most useful instrument to deepen the knowledge of a given Botanical Garden, it is the indispensable tool for the

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beginning of a recovery project to establish a correct maintenance and conservation program (ONOFRE, 2002).

In his research on the conservation of historic gardens, agronomist Bruno Luiz Domingos De Angelis and civil engineer Generoso De Angelis Neto emphasize the importance of the technique of photointerpretation as an essential instrument to know the changes, especially of the vegetable component, which occurred in the garden over the years. This procedure allows the professional whenever there are difficulties for the rescue and implantation of the original vegetation, and make decisions *ex novo* (DE ANGELIS and DE ANGELIS NETO, 2004).

The knowledge of phytosionomy of a garden results from a constant equilibrium between the life cycle of the plant and seasonality, the development and deterioration of the floristic component is a natural condition. Burle Marx stated:

The plant is a living thing that obeys a determinism conditioned by laws of growth, physiology, biophysics, and biochemistry. On the other hand, any plant is the result of a long historical process, in which it embodies, in its current state, all the experiences of a long line of ancestors, which will lose in the blurring of the first beings. The plant, in turn, enjoys in the highest degree, the property of being unstable. It is alive as it changes. It suffers a constant mutation, a permanent imbalance, whose purpose is the pursuit of balance (1967, p. 37).

Interventions carried out in the garden should be careful. Once deployed, with regard to the control of germination and plant growth, the influence of human intervention is minimal on the causes of intrinsic origin, restricting to maintenance services. Although the aging of a garden is desirable, it does not exempt from liability of human failure.

Thus, studying and aiming at the conservation of a garden require, firstly, knowing the dynamism that involves transformations of vegetation over time. Correct preservation of a garden means history, as well as maintaining and enhancing compositional and historical messages that make the garden a cultural document, rather than just a collection of plants.

Architect Maria Jose de A. Marcondes considers that operations in gardens “*should only be undertaken after thorough studies, ranging from excavations to collecting all documents referring to the garden, susceptible to ensuring the scientific character in a project*” (MARCONDES, 2009, p. 280).

Understanding the evolution of the vegetation component of a garden allows to take the correct choice of species to ensure the authenticity of the asset, which according to the Letter of Florence “*the authenticity of a historical garden relates both to the design and proportion of their parts in their composition, or the choice of plant species and other materials*” (1981, Art. 9). In this letter, precisely in Art. 12, some considerations are made concerning vegetation planting to ensure authenticity, which requires that “*the choice of species of trees, shrubs, plants, and flowers to be replanted periodically must be conducted considering the uses established and accepted for each botanical area, with the objective to identify original species and, thus, preserve them*”.

Such actions contribute to the garden conservation in its usual state that requires both practical replacements as necessary, as well as a long-term program of periodic renovations, complete eradication followed by replanting with species already formed (CARTA DE FLORENÇA, 1981, Art. 11).

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Next, we present the archaeological botany of Euclides da Cunha Square, such procedure was only possible due to countless iconographies that Nanjing drawings of Burle Marx and photos from various eras. Other sources examined were the writings and speeches of and about the landscaper

regarding the squares, as well as the floristic survey. Even though some photos did not have their dates identified, they were fundamental to the understanding of the evolution of the gardens and provided the knowledge of their vegetation element.

### The historical vegetation of Euclides da Cunha Square

From the original design of Euclides da Cunha Square, there remain some photographic records and reports of Burle Marx in newspapers and in speeches as well as testimonials from Joaquim Cardozo. The floor plan of the square was not found in the archives of the City Hall of Recife, nor in the Office of Burle Marx & Cia, in Rio de Janeiro, and consequently nor was the vegetation landscape project list.

However, by associating the floristic findings by photointerpretation (Figs. 8-11) with the

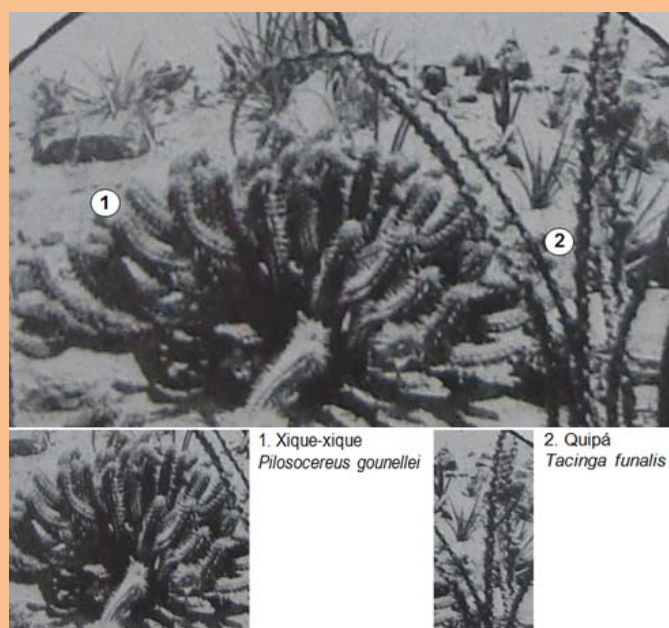
specifications made by Burle Marx in the article “Gardens and Parks of Recife: Roberto Burle Marx for the *Diário da Tarde*” of March 14, 1935 (b), it was possible to reach 13 species in 10 genera and six botanical families. Of which, 10 were identified at a specific level, two at generic level and one at family level (Table 1), which enabled the understanding of the spatial distribution of vegetation made by Burle Marx.

Source: Revista Projeto, 1991. Edition and botanical identification carried out by the author in 2012.  
Figure 8. A Burle Marx's drawing of the Euclides da Cunha Square.



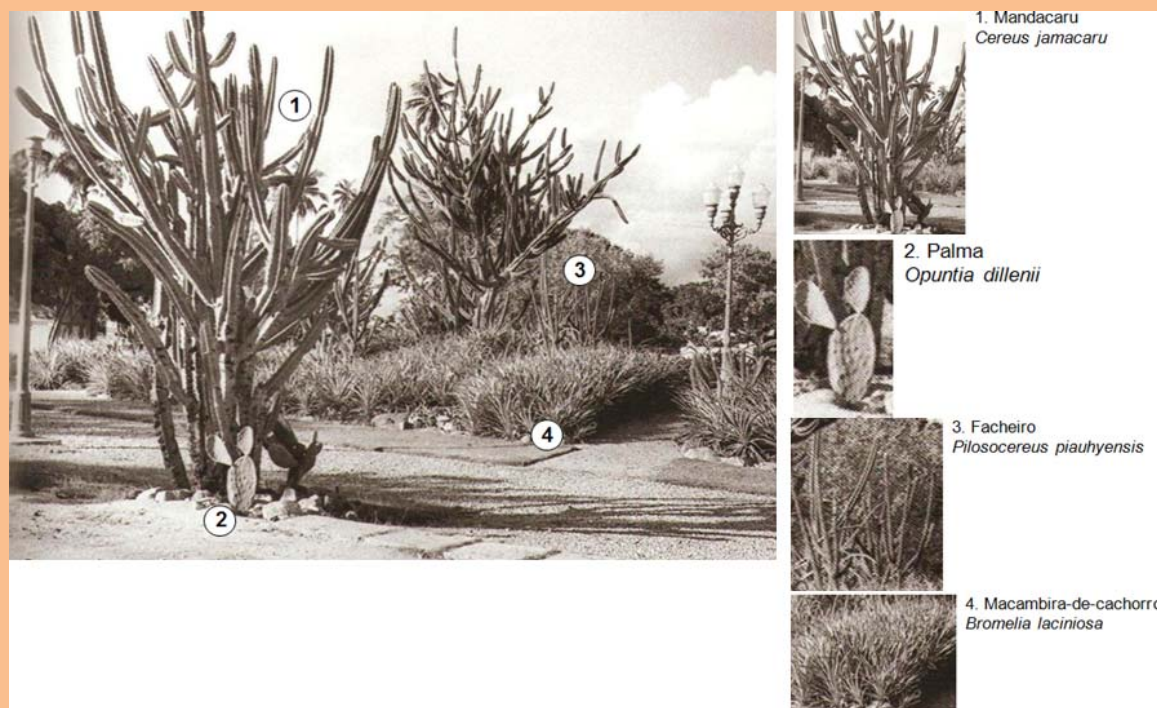
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Figure 9. Cactário on the Euclides da Cunha Square in 1936.



Source: Revista Cidade Maravilhosa, No.1, June 1936 in SILVA, 2010. Edition and botanical identification carried out by the author in 2012.

Figure 10. The Euclides da Cunha Square in 1957.



Source: Museum of the City of Recife in MAFRA, 2007. Edition and botanical identification carried out by the author in 2012.

Figure 11. Cactário on the Euclides da Cunha Square, undated.



Source: Archives of Gilda Pina in DOURADO, 2009. Edition and botanical identification carried out by the author in 2012.

Table 1. Historic Floristic composition of the Euclides da Cunha Square.

Popular Name	Scientific Name	Family	Geographic Origin <sup>#</sup>
Macambira-de-cachorro	<i>Bromelia laciniosa</i>	Bromeliaceae	Caatinga
Mandacaru	<i>Cereus jamacaru</i>	Cactaceae	Caatinga; Cerrado
Macambira-de-flecha	<i>Encholirium spectabile</i>	Bromeliaceae	Caatinga; Cerrado; Atlantic Forest
Euforbiáceas	-	Euphorbiaceae	-
Coroa-de-frade	<i>Melocactus sp.</i>	Cactaceae	-
Palma	<i>Opuntia palmadora</i>	Cactaceae	Caatinga
Xique-xique	<i>Pilosocereus gounellei</i>	Cactaceae	Caatinga; Cerrado
Faceiro	<i>Pilosocereus piauhyensis</i>	Cactaceae	Caatinga
Umbuzeiro	<i>Spondias tuberosa</i>	Anacardiaceae	Caatinga; Cerrado; Atlantic Forest
Ipê	<i>Tabebuia sp.</i>	Bignoniaceae	-
Quipá	<i>Tacinga funalis</i>	Cactaceae	Caatinga
Joazeiro	<i>Ziziphus joazeiro</i>	Rhamnaceae	Caatinga
Palma	<i>Opuntia dillenii</i>	Cactaceae	Caatinga; Atlantic Forest

<sup>#</sup> Database of Species List of Flora do Brazil/ Botanical Garden of Rio de Janeiro and of Northeastern Center of Plant Information.

Table 1 shows that the number of species identified refers specifically to the central flowerbed, which is a consequence of the valuation by the observer of the species present in the cactário, obviously, because they are more “different”. The tree

species, such as joazeiro (*Z. joazeiro*), umbuzeiro (*S. tuberosa*) and ipê (*Tabebuia sp.*) were mentioned by Burtle Marx in an interview.

With the neglect of public power, the Euclides da Cunha Square entered a process of deterioration

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that affected mainly the cactário, by the growth of tree species, which besides not being part of the original design, provided permanent shading leading to local extinction of Cactaceae that had been thriving there until the 1980s. Panhandlers who used the place as a shelter disseminated such species.

Due to the deterioration process, a part of the landscape memory of Recife was getting lost. The

City Hall of Recife, along with the Landscape Laboratory at the Federal University of Pernambuco, began in 2001 discussions about the process of restoring the garden. Table 2 shows the floristic composition of the Euclides da Cunha Square in 2002, before restoration, where of the 18 species in the square, eight are exotic and/or non-belonging to Caatinga, corresponding to 44.44% of the total.

Table 2. Floristic composition of the Euclides da Cunha Square before restoration.

Popular Name	Scientific Name	Family	Origin <sup>#</sup>
Macaibeira	<i>Acrocomia intumescens</i> **	Arecaceae	Atlantic Forest
Pereiro	<i>Aspidosperma pyrifolium</i> *	Apocynaceae	Caatinga; Cerrado
Caramboleira	<i>Averrhoa carambola</i> *	Oxalidaceae	Exotic
Jucá	<i>Caesalpinia ferrea</i> var. <i>ferrea</i> *	Caesalpinaceae	Caatinga
Catingueira	<i>Caesalpinia pyramidalis</i> **	Caesalpinaceae	Caatinga
Imbaúba	<i>Cecropia laetivirens</i> *	Cecropiaceae	Amazon Region
Paineira	<i>Chorisia glaziovii</i> *	Bombacaceae	Caatinga; Cerrado; Atlantic Forest
Imburana	<i>Commiphora leptophloeos</i> *	Burseraceae	Caatinga; Cerrado
Tamboril	<i>Enterolobium contortisiliquum</i> *	Mimosaceae	Caatinga; Cerrado; Atlantic Forest
Palmeira-Filipina	<i>Livistona rotundifolia</i> **	Arecaceae	Exotic
Mangueira	<i>Mangifera indica</i> ***	Anacardiaceae	Exotic
Jurema-branca	<i>Mimosa artemisiana</i> *	Mimosaceae	Caatinga; Atlantic Forest
Aroeira	<i>Myracrodruon urundeuva</i> *	Anacardiaceae	Caatinga; Cerrado; Atlantic Forest
Acácia-mimosa	<i>Pithecellobium dulce</i> **	Mimosaceae	Caatinga; Amazônia; Atlantic Forest
Goiabeira	<i>Psidium guajava</i> **	Myrtaceae	Caatinga; Amazônia; Atlantic Forest; Cerrado
Palmeira-imperial	<i>Roystonea oleracea</i> *	Arecaceae	Exotic
Azeitoneira	<i>Syzygium jambolanum</i> **	Myrtaceae	Exotic
Ipê-roxo	<i>Tabebuia impetiginosa</i> ***	Bignoniaceae	Caatinga; Amazon Region; Cerrado; Pantanal; Atlantic Forest
Juazeiro	<i>Ziziphus joazeiro</i> ***	Rhamnaceae	Caatinga

\*Species located out of the cactário; \*\*Species located in the cactário; \*\*\*Species located in and out of the cactário. Source: Landscape Laboratory of UFPE – Inventory of Gardens of Burle Marx in Recife, 2011.

The restoration project of the Euclides da Cunha Square was based on the Letter of Florence (1981), detailed research of the historiography of the square, interviews with people involved with the subject as well as caatinga vegetation.

The restoration began in July 2003 and was completed in May 2004. The caatinga vegetation used in the restoration project was from the seed bank of the São Francisco Hydroelectric Company, located in the state of Alagoas, Brazil. The study of

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vegetation was the main aspect for architect Liana Mosque, in a detailed study of the species from the Caatinga. Table 3 shows the floristic composition of the Euclides da Cunha Square at the end of the

restoration, represented by 28 species, 24 genera, and 15 botanical families, of which, four species are exotic.

Table 3. Floristic composition of the Euclides da Cunha Square after restoration.

Popular Name	Scientific Name	Family	Origin <sup>#</sup>
Macaibeira	<i>Acrocomia intumescens</i>	Arecaceae	Atlantic Forest
Pereiro	<i>Aspidosperma pyriforme</i>	Apocynaceae	Caatinga; Cerrado
Caramboleira	<i>Averrhoa carambola</i>	Oxalidaceae	Exotic
Mororó	<i>Bauhinia forficata</i>	Caesalpiniaceae	Caatinga; Atlantic Forest
Macambira-de-cachorro	<i>Bromelia laciniosa</i>	Bromeliaceae	Caatinga
Jucá	<i>Caesalpinia ferrea</i> var. <i>ferrea</i>	Caesalpiniaceae	Caatinga
Catingueira	<i>Caesalpinia pyramidalis</i>	Caesalpiniaceae	Caatinga
Mandacaru	<i>Cereus jamacaru</i>	Cactaceae	Caatinga; Cerrado
Jurema	<i>Chloroleucon tortum</i>	Mimosaceae	Atlantic Forest
Paineira	<i>Chorisia glaziovii</i>	Bombacaceae	Caatinga; Cerrado; Atlantic Forest
Macambira-de-fleche	<i>Encholirium spectabile</i>	Bromeliaceae	Caatinga; Cerrado; Atlantic Forest
Tamboril	<i>Enterolobium contortisiliquum</i>	Mimosaceae	Caatinga; Atlantic Forest; Cerrado
Mulungu	<i>Erythrina velutina</i>	Fabaceae	Caatinga; Amazon Region, Cerrado; Atlantic Forest
Palmeira-filipina	<i>Livistona rotundifolia</i>	Arecaceae	Exotic
Mangueira	<i>Mangifera indica</i>	Anacardiaceae	Exotic
Bom-nome	<i>Maytenus rigida</i>	Celastraceae	Caatinga; Cerrado
Coroa-de-frade	<i>Melocactus bahiensis</i>	Cactaceae	Caatinga; Cerrado
Jurema-branca	<i>Mimosa artemisiana</i>	Mimosaceae	Caatinga; Atlantic Forest
Aroeira	<i>Myracrodruon urundeuva</i>	Anacardiaceae	Caatinga; Cerrado; Atlantic Forest
Palma	<i>Opuntia palmadora</i>	Cactaceae	Caatinga
Xique-xique	<i>Pilosocereus gounellei</i>	Cactaceae	Caatinga; Cerrado
Facheiro	<i>Pilosocereus piauhyensis</i>	Cactaceae	Caatinga
Palmeira-imperial	<i>Roystonea oleracea</i>	Arecaceae	Exotic
Umbuzeiro	<i>Spondias tuberosa</i>	Anacardiaceae	Caatinga, Cerrado, Atlantic Forest
Craibeira	<i>Tabebuia aurea</i>	Bignoniaceae	Caatinga; Amazon Region; Cerrado; Atlantic Forest; Pantanal
Ipê-rosa	<i>Tabebuia impetiginosa</i>	Bignoniaceae	Amazon Region; Caatinga, Cerrado, Atlantic Forest; Pantanal
Quipá	<i>Tacinga funalis</i>	Cactaceae	Caatinga
Joazeiro	<i>Zizyphus joazeiro</i>	Rhamnaceae	Caatinga

# Database of Species List of Flora do Brazil, Botanical Garden of Rio de Janeiro and the Northeastern Center of Information about plants.

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Over time, due to the lack of continuous maintenance, some species failed to establish, since the predominant vegetation (Caatinga species) are inconsistent with the soil and climate conditions of

the region. Table 4 shows the floristic composition of the Euclides da Cunha Square in 2013, represented by 24 species, 20 genera and 13 botanical families.

Table 4. Floristic composition of the Euclides da Cunha Square in 2013.

Popular Name	Scientific Name	Family
Macaibeira	<i>Acrocomia intumescens</i>	Arecaceae
Pereiro	<i>Aspidosperma pyriforme</i>	Apocynaceae
Caramboleira	<i>Averrhoa carambola</i>	Oxalidaceae
Macambira-de-cachorro	<i>Bromelia laciniosa</i>	Bromeliaceae
Jucá	<i>Caesalpinia ferrea</i> var. <i>ferrea</i>	Caesalpiniaceae
Catingueira	<i>Caesalpinia pyramidalis</i>	Caesalpiniaceae
Mandacaru	<i>Cereus jamacaru</i>	Cactaceae
Jurema	<i>Chloroleucon tortum</i>	Mimosaceae
Paineira	<i>Chorisia glaziovii</i>	Bombacaceae
Macambira-de-fleche	<i>Encholirium spectabile</i>	Bromeliaceae
Tamboril	<i>Enterolobium contortisiliquum</i>	Mimosaceae
Mulungu	<i>Erythrina velutina</i>	Fabaceae
Candelabro	<i>Euphorbia lactea</i>	Euphorbiaceae
Palmeira-filipina	<i>Livistona rotundifolia</i>	Arecaceae
Mangueira	<i>Mangifera indica</i>	Anacardiaceae
Jurema-branca	<i>Mimosa artemisiana</i>	Mimosaceae
Palma	<i>Opuntia palmadora</i>	Cactaceae
Xique-xique	<i>Pilosocereus gounellei</i>	Cactaceae
Facheiro	<i>Pilosocereus piauhyensis</i>	Cactaceae
Palmeira-imperial	<i>Roystonea oleracea</i>	Arecaceae
Umbuzeiro	<i>Spondias tuberosa</i>	Anacardiaceae
Craibeira	<i>Tabebuia aurea</i>	Bignoniaceae
Ipê-rosa	<i>Tabebuia impetiginosa</i>	Bignoniaceae
Joazeiro	<i>Zizyphus joazeiro</i>	Rhamnaceae

Confronting the floristic composition of the Euclides da Cunha Square, based on the specifications of Burle Marx and the vegetation identification of photointerpretation (Table 1) with the floristic survey of 2013, we observe that species of the family Euphorbiaceae, as well as the species coroa-de-frade (*M. bahiensis*) and quipá (*T. funalis*) are not present in the square. However, with the exception of species of Euphorbiaceae, the coroa-de-frade (*M. bahiensis*) and quipá (*T. funalis*) were introduced during restoration, but due to maintenance problems, mainly related to water drainage of the cactário, they did not resist. The

only species of Euphorbiaceae in the square today is the candelabro (*E. lactea*) originally from India. Species such as the ipê-rosa (*T. impetiginosa*), pereiro (*A. pyriforme*), paineira (*C. glaziovii*), jucá (*C. ferrea* var. *ferrea*), jurema-branca (*M. artemisiana*), and tamboril (*E. contortisiliquum*) were already in the square, before restoration, and possessed adult size. Others like the catingueira (*C. pyramidalis*), jurema (*C. tortum*), mulungu (*E. velutina*), and craibeira (*T. aurea*) were introduced during restoration and even though they were specified by Burle Marx, they are typical of Caatinga species.

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Today, while contemplating the Euclides da Cunha Square in its entirety, we observe clearly the message that Burle Marx left in 1935 to

Pernambuco, which was a garden that brings together hygiene and art to education and culture.

## CONCLUSION

The issues addressed throughout this article show that, while conservation awareness and respect for gardens is only a conceptual approach and not an everyday practice, we still have to experience deterioration of important works. For the novelist Mário Quintana “*what kills a garden is not even any absence or abandonment (...) what kills a garden is this indifference displayed by those who pass by them*” (2007, p. 15). However, this study shows that there is an emerging need to facilitate a

closer relationship with the field of conservation, but mainly of the vegetation component, due to its ephemerality. The objective is to root the idea of a landscape culture to support theoretical effort and a practical action to break the resistance of an everyday urban, which lacks memory and respect for gardens, assets that constitute fundamental elements for the history of the landscape where we live.

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