

NATURAL HERITAGE CONSERVATION IN BUILT-UP AREAS. STUDY ON THE CIRCUS PARK AS AN URBAN LANDSCAPE ASSET

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Abstract

Circus Park is one of the most distinguished green areas of Bucharest, being a veritable urban landscape resource. Measuring 17 ha of land, it was designed during 1960-1961 following the plans of the architect Valentin Donose, who formed and coordinated an interdisciplinary team within the Bucharest Project Institute, responsible with designing green areas much needed to the capital at the time. This document aims to analyse the essential components which form a park and bestow the attribute of an urban landscape resource: vegetation, water, alleys and ornamental furniture. Circus park is the quintessential example which points to the idea that, just as man is attracted to water, he is also instinctively attracted to trees and the spaces they compose. The distribution of foliage items contained in this study cover a wide spectrum of trees, shrubs, lianas and herbaceous plants which range from wild to natural or man-made architectural shapes. This inquiry recommends maintaining the concepts found in the initial plan of the park and taking the necessary measures to preserve this natural heritage of Bucharest.

Key words: natural heritage, park, urban landscape resource, dendrological species.

INTRODUCTION

This work aims to bring into attention the necessity of preserving the natural heritage in built-up areas

Green spaces contribute to the harmony of urban architecture and also add to the aesthetic of the urban landscape, thus being an essential element of the human habitat (Godeanu, 2013). In this regard we chose a park as the purpose of this study, which through surface, compositional elements and functions is an essential component of the natural heritage of any city.

Circus Park (17 ha) is one of outstanding green areas of Bucharest sector 2. It was created between 1960 and 1961 after the plans of architect Valentin Donose, within the Design Institute "Proiect București".

This park is a classic example (didactic even) of the idea that man is instinctively attracted by water and trees and the appealing spaces that these elements create and define. The studied elements cover a never-ending palette of trees, shrubs, bushes, lianas which vary from natural wild to clearly man crafted architectural shapes. All of these aspects bestow the value of an urban landscape resource upon this park.

MATERIALS AND METHODS

This study took place between March 2016-March 2017, the focus being on the compositional elements of Circus Park: vegetation (trees, shrubs, flowering plants), the water features, walkways - tracking their evolution in time through various photographs (photo archive architect Valentin Donose - Photos 1, 2). The vegetation study was based on both a quality and quantity inventory. The quality inventory is based on identifying all the plant species through field inspections during the four seasons of the year (2 field trips per season) to phenologically highlight the vegetal species and their viability (Felicja Iliescu, 1998; Doniță N. et al., 2004; Ciocârlan, 2000). The quantity inventory was based on an established method: Braun-Blanquet (Van DerMaarel E., 1975) with which you can describe vegetal associations. Following this method led to identifying some valuable compositional areas of the park in which the plant material is predominantly made of trees and shrubs. The quantity was measured through surveys (4 surveys per field trip), each covering an area of 200 m² (the standard surface area

used in grouping trees and shrubs). This method concludes the structural and quantitative associations of plants through a combined scale of abundance - dominance after Braun - Blanquet: + - few elements with low coverage; 1 - many elements with low coverage or few elements with great coverage (up to 10% of the surface); 2 - many elements with coverage between 10-25%; 3 - various number of elements with cover between 25-50%; 4 - various number of elements with cover between 50-75%; 5 - various number of elements with cover between 75-100% (Doniță, Cocioabă, 2007).



General view of the park from Bd. Lacul Tei direction:
photo 1- year 1960 (source: arh. V. Donose);
photo 2- year 2000

RESULTS AND DISCUSSIONS

The initial project of Circus Park was outstanding through perfectly combining alley paths and combinations with planted areas which take the terrain architecture and the lake presence into account. The circulation areas respond to functional demands: granting access to visitors from carefully chosen key points

(from Lacul Tei Blvd. and Stefan cel Mare Blvd.) in link with external circulation areas and with demands of neighbouring areas (ex: high population density of Lacul Tei and Stefan cel Mare quarters), linking these quarters and ensuring circulation flow by leading to areas which serve different functions (children playgrounds, rest areas etc.) The sparse vegetation which was in place before 1960 was kept as well. It was composed mainly from a few elements of pyramidal poplar trees which remain at the base of the hill and a white poplar at the edge of the park towards Lacul Tei Blvd. (this particular poplar is an outstanding element and is protected by law to this day).

In the present day, following this study we found 33 species of trees, 12 species of shrubs and 32 species of plants. Among the better represented species of trees are: *Tilia tomentosa*, *Platanus × acerifolia*, *Acer saccharinum*, *Betulla verucosa*, *Populus pyramidalis*, *Quercus rubra*, *Salix alba*, *Ginkgo biloba*, *Taxodium distichum*, *Pinus nigra* etc. (Photos 3, 4, 5).



Photo 3 - Planted areas around the lake - year 2000
(source: archive photo arh. V. Donose)



Photo 4 - Planted areas around the lake - year 2016
(original)

In the case of shrubs we identified 12 species, among which: *Buxus sempervirens*, *Spiraea vanhouttei*, *Forsythia* sp. *Hibiscus* sp., pictured below (Photo 6). The analysed shrubs are located near the main entrance into the park, which would currently require some reconditioning interventions.

A particular problem of the study was identifying valuable compositional areas through exact grouping of plant species (inland and foreign), areas in which not only the morphological characteristics of plants was taken into account, but also the rigors of landscape architecture (Table 1).



Photo 5 - *Taxodium distichum*, year 2017 (original)



Photo 6 - *Buxus sempervirens* - access area from Lacul Tei Blvd. (source: archive photo arh. V. Donose, 2000)

In table 1 we cover two examples of important compositional areas positioned along the alley which links the two quarters (Stefan cel Mare and Lacul Tei).

Table 1. Identifying valuable compositional areas - Circus Park (original, 2017)
Survey 1 (200m²): Trees and shrubs level (A/a) of access area from Lacul Tei Blvd:

Nr. crt.	Name	A/a	AD ¹
1.	<i>Ginkgo biloba</i>	A	60%
2.	<i>Quercus rubra</i>	A	35%
3.	<i>Crataegus monogyna</i>	a	5%

Survey 2 (200 m²): Trees and shrubs level (A/a) of access area from Lacul Tei Blvd:

Nr. crt	Name	A/a	AD ¹
1.	<i>Quercus rubra</i>	A	60%
2.	<i>Tilia tomentosa</i>	A	25%
3.	<i>Crataegus monogyna</i>	a	10%
4.	<i>Forsythia</i> sp.	a	5%

¹abundance - dominance

We consider that the viability of a park is kept in place by identifying, preserving and reconditioning, where necessary, of rich, aesthetically valuable vegetation areas.

This aspect must be present in any course of rehabilitating green areas which constitute fundamental elements of natural heritage in any city.

CONCLUSIONS

This study recommends that the original concept ideas of the initial plan of the park be maintained, as well as the variety of the existing dendrological species.

Circus Park is an important component of the Bucharest natural heritage. It's value, authenticity, and uniqueness deserve to be conserved.

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