

RESEARCH ON THE ORNAMENTAL TREE SPECIES SANOGEN IMPACT UPON URBAN ECOSYSTEMS

CERCETARI PRIVIND IMPACTUL SANOGEN AL SPECIILOR POMICOLE ORNAMENTALE ASUPRA ECOSISTEMELOR URBANE

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Abstract: Meta studied landscape spaciousness throughout this paper, can be configured as bringing closer the artistic essence of urban space and industrial space in which most urban areas are planted with “sad” shrubs, “ornamental” trees that are not native to these areas and which need too much water, and annual flowers planted in organized rows. Therefore this paper presents the positive influence on the population that a city may have, city in which apple, pear, cherry, walnut trees and shrubs grow along the streets and create a well-deserved shade around parking spaces and in parks but also, offering fruits to those who wish to collect thus, combining the local gastronomic movement with the beauty of the neighborhood, consolidating communities and feeding them at the same time.

Key words: landscape, artistic essence, urban space, ornamental trees.

Rezumat: Meta spațialitatea peisajului studiat de-a lungul acestei lucrări, se poate configura ca un marș de apropiere a esenței estetice a spațiului citadin și a celui industrial în care majoritatea zonelor urbane sunt plantate cu arbuști “trști”, pomi “ornamentali” care nu sunt nativi zonelor respective și care necesită prea multă apă, și flori anuale plantate în șiruri organizate. Prin urmare lucrarea de față prezintă influența pozitivă asupra populației, pe care o poate avea un oraș în care merii, perii, nucii, cireșii și arbuștii fructiferi cresc de-a lungul străzilor și creează o bine-meritată umbră în preajma locurilor de parcare și în parcuri oferindu-și în același timp fructele celor care doresc să le culeagă combinând astfel mișcarea gastronomic-locală cu înfrumusețarea cartierelor, consolidând comunitățile și hrănindu-le în același timp.

Cuvinte cheie: peisaj, esență estetică, spațiu citadin, pomi ornamentali.

INTRODUCTION

In figurative terms, we can define the concept of introduction of the ornamental tree plants in city landscaping, as the process by which people admit that people have used too much natural capital and that – for our own sake – now it’s the time to offer something back to nature, because we depend on it and its functions. The introduction of these species in the urban landscape aims to increase the existent natural capital by complementing the efforts to preserve nature outside the delimited enclaves, where this natural capital has become dangerously reduced.

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This new way to approach of landscape, at the crossroad between project and use, as it can be seen in figure 1, determines a new polarity between the studies that see landscape as the integral result of a political construction and those for which landscape is the result of a vernacular construction, connected to the logics of everyday life. While the first studies regard the construction of the landscape from a political perspective, “from top to bottom”, the second one is more anthropological and “from bottom up” oriented.

This double perspective is applied to landscape both as spatial reality, in situ, and as a way to view and reproduce space. This means that we can talk about different ways to build landscape using a larger variety of species with the purpose of complementing the space and its need, as well as about different ways to view and use it by using ornamental tree species, that appeal to different instruments and belong to various social segments or groups. (Tudora, 2009)

MATERIAL AND METHOD

In selecting some tree species to create landscaping compositions it is mandatory to know their biological characters in order to make the landscape more harmonious with the help of different colours that have the ability to generate emotions; these colours often receive epithets like cold or warm, calming or irritant.

The harmony of colours in a landscaping theme can be influenced by the line and habitus of the trees as well as by the shape of the grounds which you can see in figure 2.

This, association of colours on a paper is one thing, and reproducing it by using vegetal material can be an entirely different thing. Thus, the following species have been considered, depending on their decorative elements:

- Species which decorate through sprouts: *Cornus alba*, *C. stolonifera*, *C. sanguinea*, *Corylus avellana*, *Prunus lusitanica*, *Hippophae rhamnoides*;
- Species which decorate through flowers: *Corylus maxima*, *Cornus officinalis*, *Lonicera japonica*, *Malus coccinella*, *Prunus serrulata*, *Prunus tenella*;
- Species which decorate through fruits: *Cornus kousa*, *Cornus mas*, *Crataegus monogyna*, *Prunus persica*, *Prunus cerasus*, *Sambucus nigra*.

As working method, we have observed the decorative species, described and studied the psychological effect of colours on the psyche.

We would also like to mention that the secret, charm and soul of the composition depends on the colours' effect.

In nature it can be found in the branches of *Cornus alba* "Sibirica", *Cornus sanguinea*, *Prunus lusitanica*, in the flowers of *Chaenomeles japonica*, *Lonicera*, *Malus coccinella* and the fruits of *Malus sargentii*, *Prunus cerasus*, *Rubus idaeus* and others. (Connan, 1999)

In nature, it is most often met as the colour of the flowers for species: *Cornus kousa*, *Cornus floribunda*, *Prunus glandulosa*, *Prunus laurocerasus*, *Pyrus elaeagnifolia*, *Sambucus nigra*, *Mespilus germanica*, *Lonicera japonica* but it can also be found as the colour of young sprouts of *Pyrus nivalis* or the fruits of *Cornus glabrata*. (Pollak, 2004)



Fig. 1 - Bacău center before introducing the fruit species in the landscape in two diferent compositions of the same square. (original)

RESULTS AND DISSCUSIONS

With the present paper we will focus only on the ornamental tree plants of real esthetic and functional interest, because the project we propose focuses on a landscaping formation of intentional nature and not on natural landscape. Still, we must also consider the fact that landscaping can receive some conditionings or influences from the natural landscape it is surrounded by.

Consequently, the species taken in for the study besides their special aesthetic characteristics also have a high ecologic plasticity, since our country is one of the European countries where the culture of fruit-bearing trees is well represented through a high diversity of species and varieties, that find here the favourable soil and weather conditions for growth and fruit yield, also insuring an echeloned fruit consumption throughout the year.

As it is well known, the distribution of vegetation from one area depends on the modification of the climate from one region to another. Among the climate elements, temperature and humidity play an important part in this respect. Even if they can be controlled and artificially induced, it is recommended to predominantly use the species with a high rusticity degree that are also decorative in the landscaping compositions of a certain area, since they are much easier to use in arrangements and easier to care for on the long run, in comparison with the exotic species that in this case involve certain maintenance and care measures. (Grigorovschi, 2012).



Fig. 2 - Chromatic effect of *Vaccinium* spp fruit, the green of the *Cornus mas* , the purple of the *Prunus cerasifera*'s leaves and the cherry of *Prunus laurocerasus*'s flowers compared with the dull landscape of Bacău center after introducing the fruit species in the landscape of the square. (original)

Thus, the present paper aims to make a presentation of ornamental fruit bearing trees that create such a diversity of the landscape in public areas that it's impossible to conceive an arrangement without them; they are highly decorative due to their varied shape, and the different colour of the leaves during the vegetation period as it can be seen in figure 3, the blossoms, that are often pleasantly fragrant and last but not least, due to the beauty of the fruit and the forms and colours they have, and the taste and health they offer through the vitamins they contain.

The species with small fruit will be placed closer to alleys, without creating any prejudices once they fall after maturation.

The ones with larger fruit that perhaps last after the leaves fall can be placed further away from the beholder.

Though most species have average or slow growth rate, the species with rapid growth rates are the most requested, needed to a rapid shape-up of the vegetal landscape.

Some tree species which you can see in figure 2, especially those belonging to the *Prunoideae* family have a high sucker ability, which must be taken into consideration for the emplacement and association of species, for a proper setting of planting distances. Sucking can become an inconvenience for the associated species, and a cause of sidewalks, alleys and construction elements deterioration.



Fig. 3 - Psychological effect of diferent colours of the ornamental trees species in the urban lanscape of Bacău center, presented in two diferent compositions of the same space. (original)

Green, yellow, orange are warm, active colours, and blue, green and violet are considered passive, asthenic. The warm tones harmoniously go together with the cold ones. (Miller, 2001).

Besides the colour effect, we mustn't ignore the different degree of compactness of the crowns, or the texture of the leafage.

In selecting some tree species for the creating of landscaping compositions it is mandatory, that in addition to the understanding of the decorative characters we have a biological and ecopedological understanding in

order to be able to create a more harmonious design from an aesthetic and practice point of view, combining the local gastronomic movement with the beauty of the neighborhood, consolidating communities and feeding them at the same time.

CONCLUSIONS

1. The harmony of colours in a landscaping composition is obtained by skilfully combining more colours.

2. Meta studied landscape spaciousness throughout this paper, can be configured as bringing closer the artistic essence of urban space and industrial space in which most urban areas are planted with “sad” shrubs, “ornamental” trees that are not native to these areas and which need too much water, and annual flowers planted in organized rows.

3. This paper presents the positive influence on the population that a city may have, city in which apple, pear, cherry, walnut trees and shrubs grow along the streets and create a well-deserved shade around parking spaces and in parks but also, offering fruits to those who wish to collect thus.

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