

EFFECTUL CROMATIC AL FLORILOR, FRUCTELOR ȘI RAMURILOR, VĂZUT CA O SURSĂ DE CULOARE ÎN PEISAJUL VEGETAL FLOWERS, FRUITS AND TREE BRANCHES CROMATIC EFFECT, SEEN AS A SOURCE OF COLOR IN THE VEGETAL LANDSCAPE

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Abstract

The harmony of colours in a landscape composition is essential, therefore, knowing this fact and the proper use of the colours in a harmonious way leads to spectacular results. To reach this objective we conducted a study upon how the colour of flowers, fruits and branches of several ornamental fruit trees species influences the volumetric space harmony of the gardens. Starting from the premise that every colour has an active presence in our lives and it carries many messages, resulting in both aesthetic symbols and the psycho-physiological effects, it can be observed that the harmony of colours in an arrangement generates feelings of vitality and freshness, as strong contrasts produce tensions with the incentive effect.

Keywords: chromatic effect, landscaping, *Prunus*, harmony, colours

Cuvinte cheie: efectul cromatic, amenajare peisageră, *Prunus*, armonie, culori

1. Introduction

The space - volumetric compositions of landscapes, definitely takes into consideration the colour relationships in which green remains the dominant colour shaded in various chromatic accents with special effects. To this purpose, a special role is played by the fading-out effect which protects the nervous system for a series of stress factors present in certain working environments. There is no doubt that the colour of the environment contributes to man's mental harmony.

Talking about the harmony of the colours, it is considered that these are the most harmonious when, laid one next to the other they pleasantly impress the eye (Șelaru Elena, 2004).

Goethe thought that complementary colours generate a pure harmony, and others see harmony better in a combination of colours far off the complementary one.

Each colour has its complementary colour, diametrically opposed on the chromatic circle, which does not have the same pigment amounts. They are thus opposed and mutually enhance their effect. It is interesting to know that each colour of the spectrum has its complement in other colours of the spectrum. To create a harmonious composition, the neighboring colours added, also play an important role.

2. Material and methods

In selecting tree species to create landscaping compositions it is mandatory to know their biological characters in order to make more harmonious landscapes 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 landscape theme can be influenced by the line and habitus of the trees as well as by the shape of the grounds. Thus, the association of colours on a paper is one thing, and reproducing it by using vegetal material can be an entirely different thing. The following species have been considered, depending on their decorative elements:

- Species which decorate through sprouts: *Cornus alba* "Sibirica", *C. stolonifera*, *C. sanguinea*, *Corylus avellana* "Contorta", *Prunus x cistena*, *Prunus lusitanica*, *Hippophae rhamnoides*.
- Species which decorate through flowers: *Corylus maxima*, *Cornus officinalis*, *Lonicera japonica*, *Malus* "Royalty", *Malus coccinella*, *Prunus serrulata*, *Prunus tenella*, *Prunus niponica*.
- Species which decorate through fruits: *Cornus kousa*, *Cornus mas*, *Malus* "Golden Hornet", *Crataegus monogyna*, *Malus Everest*, *Prunus persica*, *Prunus cerasus*, *Sambucus nigra*.

As working method, we used the observation of the decorative species, described and studied colours psychological effect on the psychic.

We would also like to mention that the secret, charm and soul of the composition depend on the colour's effect.

Among the effects and symbolism of colours on human's mental state and the function of certain organs we can mention:

Yellow, is the symbol of happiness, greatness and splendor. It is the colour of richness and creates a sensation of satisfaction increasing well being and the pleasure to live (the vital force of spring is partly due to the yellow flowers which dominate the yellowish - green of grass and leaves in foliage). In the nature this colour is found in the flowers of the following species: *Corylus maxima*, *Cornus officinalis*, branches of *Cornus sericea* "Flaviramea" and fruit of *Malus* "Golden Hornet", *Pyrus* "Contesse de Paris" and others.

Red, symbolizes love and passion, freedom and life. It is the most important and most active colour. Dark red indicates seriousness and worthiness and light-red suggests a strong will and independence. On human sub-consciousness, red stimulates the appetite, well being; it sometimes affects the heart and nervous system and can be overwhelming for people with a modest sense of adventure (Constantin P., 1979).

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

Orange, represents power, but also vanity. It is the colour that radiates a lot of warmth and happiness. It exercises a lot of influence on the other colours and can be found in the flowers of *Chaenomeles speciosa*, *Chaenomeles superba*, *Lonicera tellmanniana* and also in the fruits of *Hippophae rhamnoides*, *Malus* Everest, *Prunus armenica*, *Sorbus matsumurana* and others.

Violet, symbolises luxury, greatness, friendship and integrity. It is the colour of holiday, but there are shades which have contrary effect, even unpleasant and disturbing. In nature, this colour is most often met with the fruit of the species *Prunus domestica* and *Lonicera nitida*.

Blue, expresses a lot of seriousness, coldness or suffering. It is the symbol of the infinite, distance, belief, trust, but also of sadness, since it creates a sensation of relaxation and calm, being a calming, relaxing colour. Blue is rarely found as the colour of branches or flowers, but is often met as the colour of fruit for various species: *Vaccinium myrtillus*, *Cornus hemsley*, *Prunus domestica* "Quetsche d'Alsace" and others.

White, represents cleanliness, honesty and purity. It separates and stresses the other colours. In nature, it is most often met as the colour of the flowers for species: *Cornus kousa*, *Cornus floribunda*, *Pyrus* "Contesse de Paris", *Prunus glandulosa* "Alba Plena", *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* (Golu M., 1974).

Green, is the symbol of wealth and hope. Creates the impression of calm and rest, gives a sense of calm after hard work. Light-green express joy, happiness, youth, dark-green unpleasant cold sensations, and yellow-green of a certain color saturation is the so-called poisonous, repulsive (Miller Judith, 2001).

Yellow, red and orange are warm, active colours, and blue, green and violet are considered passive, asthenic. The warm tones harmoniously go together with the cold ones.

Besides the colour effect, we mustn't ignore the different degree of compactness of the crowns or the texture of the leafage. Thus, we can obtain semi-transparent silhouettes, with light-shadow effects or compact silhouettes with emphasized contours, generating strong shadows.

In selecting some tree species for the creating of landscaping compositions it is mandatory, that in addition to the understanding of the decorative characters to 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.

Among the biological characteristics that are taken into consideration in selecting the species for vegetal compositions, the following are important: growth rhythm, longevity, ability to obtain suckers, as well as the resistance to disease and pests, without neglecting the resistance to polluting factors, specific for urban areas (Mihăilescu D., 1980).

The study we made showed the fact that the bark contributes to the increase of esthetical effects through the colour, texture of the bark, the presence and aspect of thorns.

The climate and soil requirements are essential factors in selecting the plants for a high quality, long lasting landscaping composition.

Regarding warmth requirements, the tree species that cover a large enough area, from the ones that love the heat, with high heat exigencies such as *Prunus tenella*, *Prunus armeniaca*, *Persica vulgaris*, to the mesophile ones such *Malus pumilla*, or oligothermal such as the *Malus baccata*, *Prunus ussuriensis*, *Prunus spinosa*, *Prunus cerasifera* (Dascălu Doina Mira, 2006).

Light radiation also has an essential influence on the vegetation, from this point of view there are species with high requirements for light, such as *Juglans nigra*, *Prunus armeniaca*, *Persica vulgaris*, *Prunus avium*, and others with average requirements for this factor, such as *Pyrus* sp. *Malus* sp., *Prunus* sp. Also, the chromatic effect of the vegetation, which depends on the quantity of light, can change the colour of the leaves.

3. Results and discussions

The present study has started from a certain characteristic, decor part of the analyzed species.

The flowers are a major ornamental characteristic, despite their ephemeral character. For most trees we have first noticed the mass effect, the colour of the flowers defining the silhouette itself, as is the case of apple trees, cherry trees and peach trees.

Some species have large flowers 3-5 cm in diameter, simple or ruffled, in soft colours, also noticeable through their perfume: *Cydonia oblonga*, *Lonicera japonica*, *Malus baccata*, *Pyrus* "Contesse de Paris", *Prunus serrulata*, *Sambucus nigra*.

In order to stagger in time the created decor, on different blossoming periods, it is important to know the period and duration of blossoming, and the colour of the flowers of these species.

The fruit, on the other hand, bring an additional decorative character, that should be exploited through harmonious associations of various species. For the compositions, must also to take into consideration the abundance, colour, size and form of the fruits and the maximum decoration period.

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 leaves fall, can be placed further away from the beholder (Posedaru Alina, 2000).

In relation to the surroundings, we notice that those colours that differ from the dominant colour of the landscape draw the most attention. Any colour seems brighter if it is not found in the area surrounding the visual field. The greater the difference between the primary colour and surrounding area is, the larger the colour contrasts are and the more dynamic the decorative effect.

There are people for whom a single colour brings them pleasure, and there are others who find harmony in large colour pallets. For the latter, creating harmonious contrasts between two or more colours is the ideal of joy and pleasure to watch.

The growth rate depends on the species and is influenced by the conditions of the environment.

Most of the species have an average or slow growth rate, the species with rapid growth rates are the most requested, and needs a rapid shape-up of the vegetal landscape.

Some tree species, 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 (Stanciu N., 2006).

4. Conclusions

The harmony of colours in a landscape composition is obtained by skillfully combining more colours.

It has been noted that a colour is accentuated if opposed to another instead of excluding one another; they are more enhanced, obtaining a maximum decorative effect.

Can't be obtained a harmonious assemble when all three primary colours are used for the same landscape project.

In order to obtain a fading effect, we could use one primary colour, never two.

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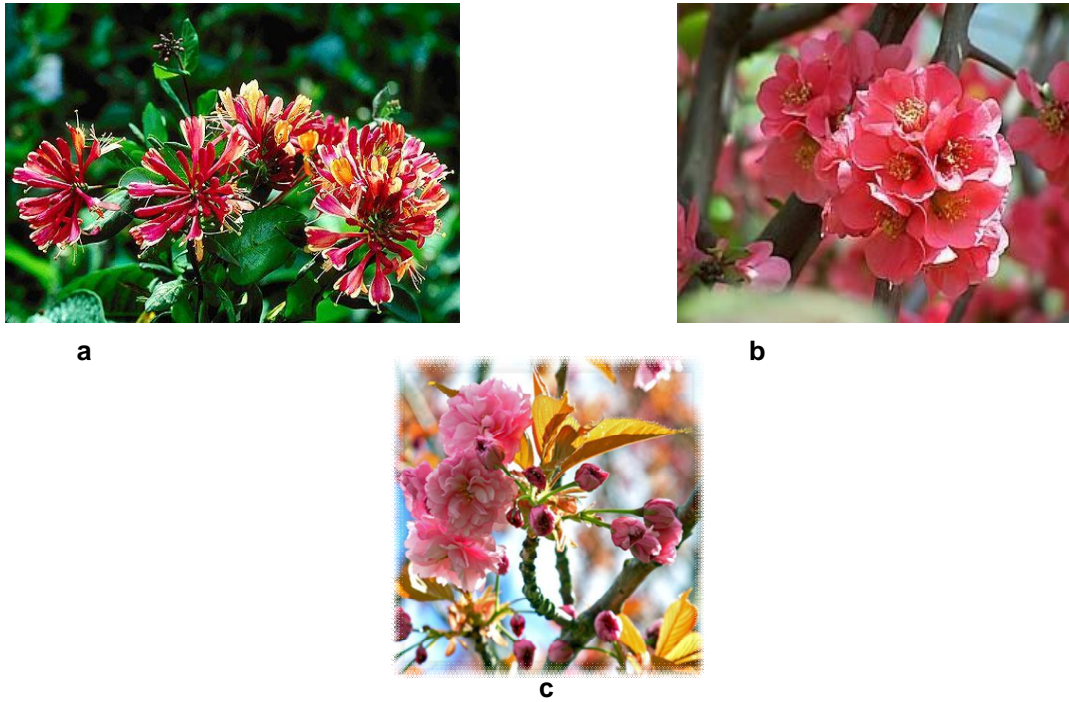


Fig.1. Flowers from, *Lonicera fragrantissima* (a), *Prunus serrulata* (b) and *Chaenomeles japonica* (c) (www.flicker.com)

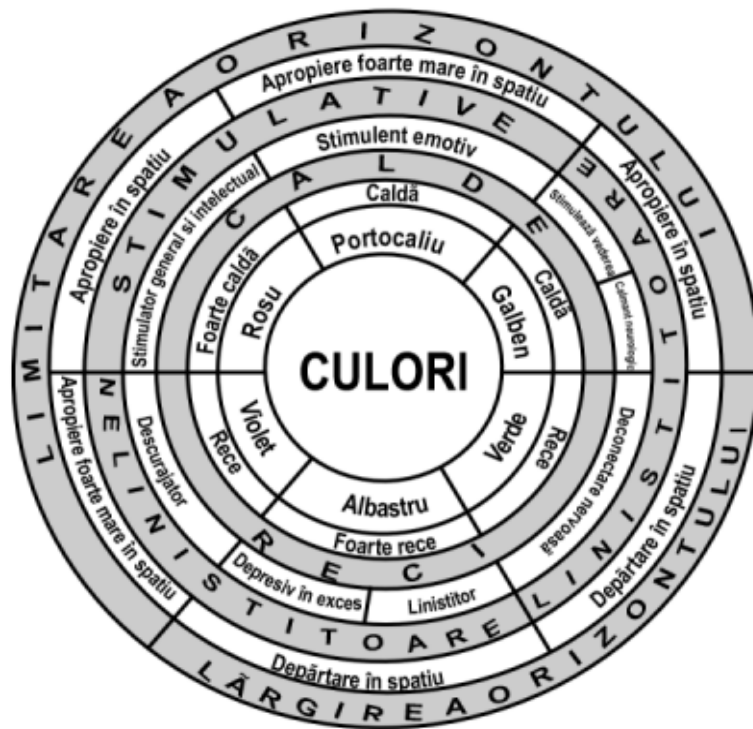


Fig. 2. Psychological effect of colours



a



b



c

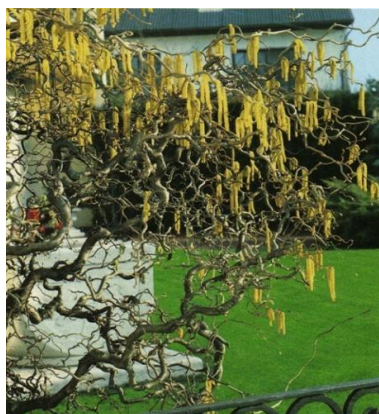


d

Fig. 3. Chromatic effect of *Vaccinium* spp fruit (a), the purity of *Cornus florida*'s flowers (b), the purple of the *Prunus domestica*'s fruits (c) and the green of *Juglans regia*' fruits (d) (www.flicker.com)



a



b



c

Fig.4. The colour effect of the branches of *Cornus sibirica* (a) in contrast to the white of the snow; the flowers of *Corylus avellana* Contorta (b) and the fruit of *Rosa centifolia* (Caucasian Brier) (c). (original)

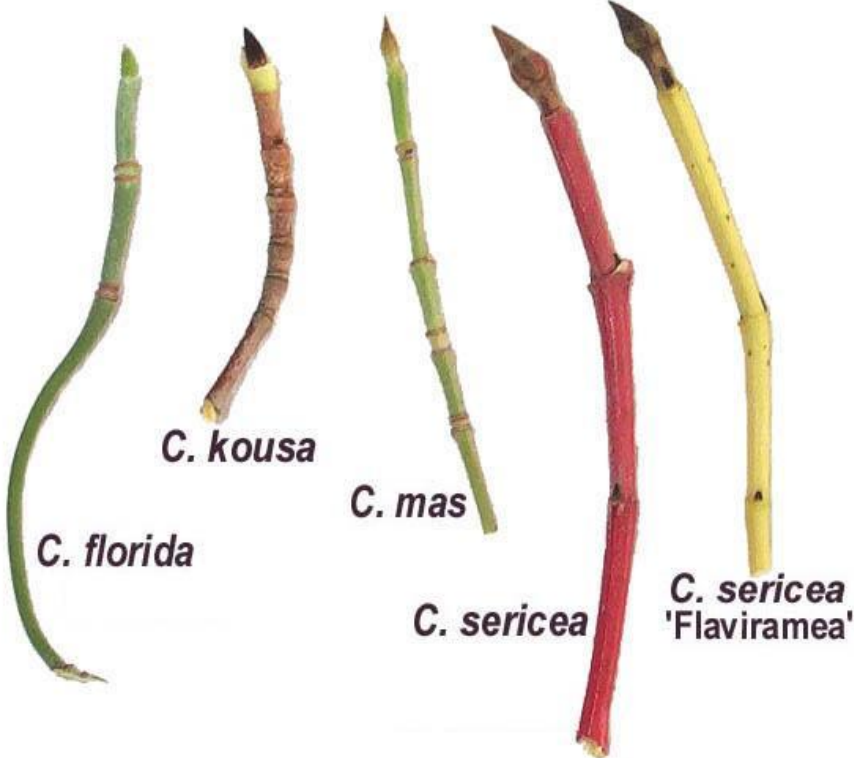


Fig.5. Aspect of branches for different species of *Cornus*