IMPLEMENTATION OF THE BRODERBUND HOME DESIGN 5.1 PROGRAM IN LANDSCAPE DESIGN ARCHITECTURE – PLANT USING AND MANAGEMENT OF PLANT ENCYCLOPEDIA

IMPLEMENTAREA PROGRAMULUI BRODERBUND HOME DESIGN 5.1 ÎN AMENAJAREA SPAȚIILOR VERZI – UTILIZAREA PLANTELOR ȘI A ENCICLOPEDIEI BOTANICE

DUMITRAŞ ADELINA, SINGUREANU V. SABO GEORGETA MINODORA
University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca

Abstract. *The program comes to support architects and landscape designers through its two distinct components home architect and landscape design with powerful tools for vectorial drawing, on x and y coordinates length, height, landscape curves etc. Management of plants it's gradual with four specific steps: insertion of the plants, searching additional informations on the plant encyclopedia upon the inserted plants, managing the age of the inserted plants for a better revelation of the design with the actual conditions in the field, and not at least season change of the created design, with a dynamic view of the plants development through all the seasons of an year. The plant encyclopedia as integrated part of the program has detailed information for 7500 plant varieties. Each plant is presented through its scientificall name, common name, usage of the plant, vegetation period, blossom period, fruit or seed obtaining period. Each plant from the plant encyclopedia has its specific calendar witch shows all the maintenance works specific for the plant. The plant encyclopedia becomes complete with the section related to pest and diseases determination, powerful illustrated.*

Rezumat. *Programul se doreşte a venii in sprijinul arhitecților cât şi a peisagiştilor cuprinzând, doua părți distincte home arhitect (arhitectura caselor) landscape design (amenajare peisageră) cu unelte puternice de desen vectorial pe bază de coordonate x şi y, lungime, lățime, înălțime, curbe de nivel, etc. Abordarea utilizării plantelor in acest program se face gradual cuprinzând patru etape distincte: inserarea plantelor, abordarea plantelor din perspectiva unei enciclopedii botanice, oferind surplus de informații aferent speciei introduse in proiect, modificarea vârstei plantelor introduse, pentru o cat mai buna mulare a creației programului cu realitatea, observarea întregului proiect în dinamică, de-a lungul anotimpurilor specifice unui an calendaristic. Enciclopedia botanică, parte integranta a programului, vine cu un surplus de informații aferent celor 7500 de specii cuprinse în ea. Fiecare specie este prezentată prin denumirea ei ştiințifică, cât şi cea populară, modul de folosință al plantei, perioada de vegetație, perioada de decor, perioada de obținere a fructelor sau a semințelor. Fiecare plantă inclusă în enciclopedie are alocat un calendar specific lucrărilor de întreținere cu animații flash sub o formă grafică avansată, arătând modul de desfăşurarea al fiecărei lucrări de întreținere în parte. Enciclopedia este întregită şi prin secțiunea adresată combaterii bolilor şi dăunătorilor, bogat ilustrată.*

PLANT INSERTION AND MANAGEMENT

The Plant Tool gives many options for working with plants, trees, shrubs, and more in the selected project. The program can insert plants, select and learn about plants through an extensive encyclopedia of more than 7,500 items, view your landscape at different stages of growth and different seasons of the year. The Plants Tool icon has a different state for each of these four functions. A single click on the Plants Tool performs the function indicated by the icon.

	Insert plants
	Open the Plant Encyclopedia
	Change the maturity (years of growth) of the plants in your landscape
	Change the season to view your landscape at different times of the year

Fig.1. The functional characteristics for the plant insertion tool

To insert a plant:

1. Make sure the Plants Tool is set to the Insert Plants function.
2. Select a plant from the Catalog list.
3. Click in your 2D Plan view where you want to insert the plant(s).
4. When you are finished inserting plants of the type you have chosen, select another plant from the catalog or right-click and select Finish.

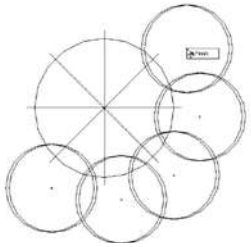
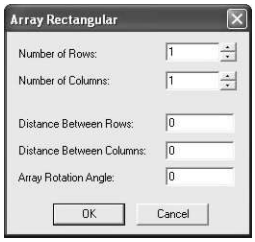
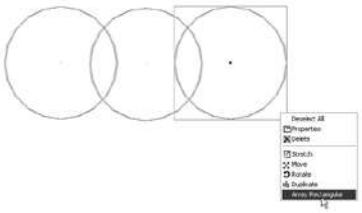


Fig.2. Plant insertion in a 2D Plan view

To insert a group of plants:



1. Insert the type of plant you want at the left end of the first row that you want to create.
2. Right-click on the plant in your 2D Plan view and select Array Rectangular. The Array Rectangular dialog will open.
3. Type in the number of horizontal rows of plants you want.
4. Type in the number or vertical columns of plants you want (if you only have a single row of plants, this will be the number of plants in that row.)
5. Type in the number of inches for the distance from the center of one plant to the center of the next plant in the row.
6. Type in the number of inches for the distance from the center of one plant to the center of the next plant in the column.



7. Click OK.

Fig.3. Insertion of a plant group

To manually change the size of a plant:

1. Select the plant(s) you want to change. You can change the age for each plant individually, or for all plants that are the same species - all the Oak trees in your project, for example.

2. Right-click and select Properties.

3. Click on the Size tab.

4. In the field that reads, "Size from Encyclopedia?" click on the "Yes" and select "No" instead.

5. Enter desired values for Width and Height. (fig.4)

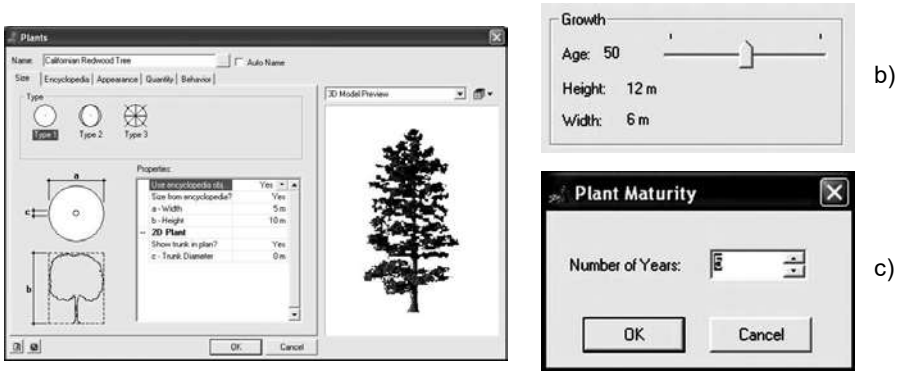


Fig.4. Different ways to control the plant age and size

USING THE PLANT ENCYCLOPEDIA

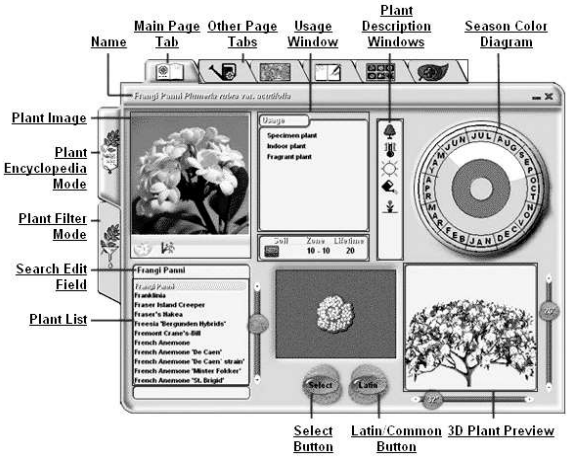


Fig.5. Plant encyclopedia (general description)

The Plant Encyclopedia contains comprehensive information on 7500 different varieties of plants. You can retrieve information about any plant, choose plants based on certain criteria, research potential diseases that each plant might

suffer from, or learn how to care for a given plant. You can use the Plant Filter to select a smaller group of plants based upon chosen criteria.

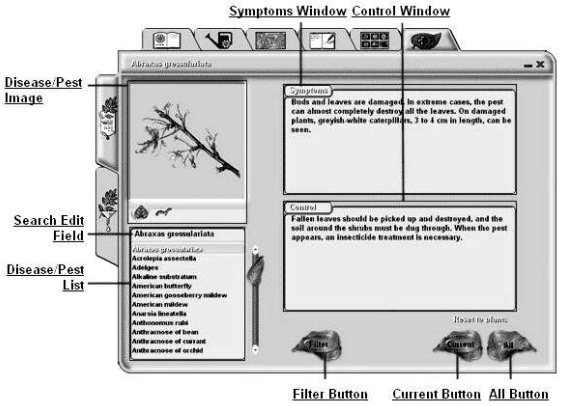
Main Page Tab - Clicking this tab brings up the Main page that you see above if you are in Encyclopedia mode. This page is where the majority of information on any plant can be found.

Plant Encyclopedia Mode - Clicking on this tab puts you in Encyclopedia Mode, where you can find information on the 7,500 plants in the program, as well as diseases that might affect them.

Name - The banner across the top of the page shows the Latin and Common name of the currently selected plant in the plant list. You can switch which name is listed first by clicking on the Latin/Common Button.

Search Edit Field - The box at the top of the plant list allows you to jump to the plant you want by typing in the first few letters of the name. The list of plants will move to the closest match as you type.

Season Color Diagram -The circle on the upper right corner of the Encyclopedia Main Page gives an idea of what you can expect from the chosen plant throughout the year. The outer circle shows the months in which the plant blooms and the color of its flowers. Fruits are also indicated in this circle, showing the period when they ripen and the color of their fruit. The inner circle indicates when the plant has foliage (including autumn leaves) and the color of its leaves.



Plant Diseases Page - This page shows a list of the possible diseases, pests, or other problems that may affect a plant (current plant, selected plants, or all plants from the Encyclopedia). (fig.6)

Disease/Pest Image - This is a real-world image or artists rendering. The box below the image indicates what you are seeing - i.e. the part of the plant (flower, bulb, leaf, etc.) or type of pest (vermin, insect, etc.). If the window below the picture shows more than one icon, the selected disease has additional pictures or video. Click on the icons to change the image in the picture frame.

Symptoms Window – This window provides a description of the indications that a plant is a victim of the currently selected disease or pest.

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DIFFICULTIES IN INSTALLING A JAPANESE GARDEN

DIFICULTĂȚI ÎN REALIZAREA UNEI GRĂDINI JAPONEZE

CAMELIA IFRIM
Botanical Garden "Anastasie Fatu"
of University "Al. I. Cuza" Iassy

Abstract*: Close to other specific Japanese arts (origami, cha-no-yu), the art of setting up gardens represents a quintessence where philosophy pays for the main role. The installation of a Japanese garden acts like a provocation for the European man. Choosing and using the vegetal material, ligneous material especially, which does not often resist in our climatic conditions, represent one of the first difficulties. Another difficulty regards the building and the usage of the decorative elements, especially the most perishable ones (lanterns and lampions). Impregnating the "air" specific to the oriental extreme represents a difficulty, which constitutes the most important provocation for the one who builds the garden, but the one that offers important satisfactions, too.*

Rezumat*: Alături de celelalte arte specific japoneze (origami, cha-no-yu) şi arta amenajării grădinilor este o chintesență în care locul principal îl are filosofia. Realizarea unei grădini japoneze reprezintă o provocare pentru un european.*
O primă dificultate o reprezintă alegerea şi utilizarea materialului vegetal, în special lemnos, care deseori nu rezistă în condițiile climatice de la noi. Altă dificultate este legată de realizarea şi valorificarea elementelor de decor, în special cele uşor perisabile (lanterne şi lampioane). Impregnarea aerului specific extremului orient este o dificultate ce constituie cea mai mare provocare pentru cel care realizează grădina, dar şi cea care oferă satisfacții deosebite.

The Far East has always charmed the Europeans with its fascinanting arts: the art of flower arrangement (*ikebana*), the ancient Japanese art of paper folding (*origami*) and the ancient art of aesthetic miniaturization of trees (*bonsai*). Creating a garden that follows the rules of the Japanese masters is both an art and a strong challenge.

Powerful symbols in the Far East, the Japanese gardens often loose their purpose when being recreated. Perhaps, that's the reason we should consider what a Japanese designer said: we speak about Japanese gardens in Japan, and about gardens in Japanese style in the rest of the world.

Japanese gardens contain vegetation, rocks, water, but what shows the craftmanship of the craftsman is the way these elements are put together.

RESULTS AND DISCUSSIONS

The plants that are traditionally used are native to Asia. It's quite difficult to use plants under the climate conditions of Iasi. The late April – May frosts can cause severe demage to the young plants. Another problem, in recent years, is the prolonged drought. The frost demages the deciduous trees and the drought demages the coniferous trees.

Among the coniferous trees (and gymnosperms , in general), the species of *Thuja* and *Chamaecyparis*, *Ginkgo biloba* resist quite well. But the species of *Cryptomeria japonica* and *Sciadopytis verticillata*, live for a few years, so it's not advisable to use them.

For the species of deciduous trees affected by the harsh winter conditions, it is necessary to be used a sheltered place, either a building, or a long – leafed plant of small woods, preferably of coniferous trees. Besides, they function as a background for either the beauty of the flowers, or the coloured foliage.

The star magnolia can be found in each Japanese gardens, and the reason is the beauty of the flowers. They are sensitive, in the first years of life. *Magnolia Kobus* tolerates the limestone soil, and *Magnolia stellata*, that has many flowers in its first years of life, likes to live in the sheltered, sunny places, because the strong wind, rain and frost can damage the flowers. It is best to grow this kind of magnolia in small gardens as it is 5 m high.

The Japanese maple are famous, but their sensitivity to unfavourable climate conditions is well – known, too. *Acer palmatum* [5] and the species with ornamental leaves are very sensitive as well. They best grow in places protected against the north and east winds, a light rain and rich in humus soil. The kinds of Red Maple and the kinds with lobed leaves are more sensitive than the species. *Acer triflorum*, a brightly red coloured species, from Asia, prefers high humid areas and balanced climate.

In the case of *Acer* species, we can replace the well – known ornamental subspecies with the variegated ones from *Acer negundo* or we can use a less known but more resistant species, *Acer ginnala*. The *semenovii* variety of *Acer tataricum* species, from Turkistan and Tian Shan, is very beautifully red coloured in autumn [1].

An everywhere symbol in Japan is the Japanese cherry tree. Of the species of *Prunus*, we grow *P. armeniaca, P. glandulosa, P. japonica, P. serrulata, P. triloba* [4], most in our country. The countless number of "Japanese cherry trees" worshiped in The Land of The Rising Sun are varieties of *P. serrulata* species. The varieties with double or semi-doubled flowers, and whose flowers last longer

are preferably used. Most of the time, these trees do not live for too many year, because they suffer from the late spring frosts or from the extremely severe winters. Besides these species, they sometimes grow *P. cerasifera var. pissardii* for the rust – coloured foliage, and because it's more rustic.

The willow species are quite easy to multiply and to maintain. The most valued kind is *Salix matsudana 'Tortuosa'* which, besides *Salix babylonica* and *S. purpurea* , is often grown in areas near water such as lakes, pools, etc.

Sophora japonica, best preferred as the cultivar '*Pendula*', requires attention in its first years of life, when the radicle system is fragile and it can be damaged by the late frosts. It likes a deep, fertile, rich in limestone soil, which allows to be planted near the falls made of limestone.

Albizia julibrissin is a species with a difference, admired, and planted for it delicate inflorescence. It is extremely sensitive and it recommended to be planted only in very sheltered interior gardens.

The rhododendron species is native to Far East. *Rhododendrom dauricum* resists very well to our climate conditions [6]. It requires a specific protection during winter time, then we can enjoy the beauty of its light violet petals in March – April. If the freezing temperatures can damage it in its first years, the severe dryness can damage it later in its life. That's why it is recommended it should be watered during prolonged droughts. Other species pretty resistant are *R. luteum* (from Caucaz), *R. mucronulatum* (from Eastern Asia), *R.schlippenbachii*, also known as 'royal azalea', native to Korea and Manciuria, resists well to the winter frost, but it is sensitive to the spring frost. Of the species with long – lasting foliage, *R. smirnovii* is more rustic, the species is native to Turkey and Caucaz. It is interesting for both the pink – purple flowers that bloom in spring and the young offshoot with dark hues.

Cornus kousa requires a slightly silicious soil. The hard soil must be avoided because the trunk doesn't grow nicely and it doesn't have nicely coloured leaves in autumn. To increase the colouring in autumn, potasium is added in September [1]. The young trees obtained from seeds and cuttings can blossom in 7 or 15 year's time. The young trees obtained by grafting blossom in 2-3 year's time.

A less used species, but it's worth the attention is *Enkianthus campanulatus*, an elegant shrub with its red flowers and leaves in autumn, but quite rustic.

Of the *Euonymus* species with falling leaves, *E alatus* stands out, with an exquisite carmine foliage in autumn, and *E fortunei* is an evergreen shrub whose cultivars with variegated and ornamental leaves and it resists without any protection during wintertime.

A valuable species is *Viburnum fragrans* because it blossoms in winter, but the flowers can be damaged by the strong frosts.

Buxus microphylla is a rustic species, which supports both half shadow conditions and strong sun, both wet and dry soil. It can be re – planted, even at a

late age. It is ideal for being cut in different shapes, a highly appreciated custom by the Japanese.

Of the *Hydrangea* species, *H. paniculata* is the most rustic one and it can reach up to 10 m height. The *H. aspera*, *H. heteromalla*, *H. macrophylla* [4] species require a sheltered place and protection during wintertime.

The big flowers of the peony can decorate successfully a corner in the garden, but the shrub peonies are rather used, such as *Paeonia delavayi*, *P.lutea* or *P. suffruticosa*. They best grow in the same place, up to 50 years, so it is recommended this place should not be changed. But when it is absolutely necessary to do the change, it is best to do it in October or March. It is best to be grown in a sunny place, sheltered from the wind and it prefers a soil rich in nourishing, fertile substances and well drained.

A few kinds of *Skimmia japonica*, with ornamental flowers and leaves, are recommended for a rocky place. It is a less rustic species, which grows better towards the south or west, protected by the shadow of big trees.

When choosing the bamboo trees, one should be very careful to the rhythm of invasion of the species. A great many of species are rustic enough to resist, even though they suffer damages during the harsh winters. They recover quite quickly as the spring comes. The species of the *Sasa, Pseudosasa* kinds and a few of the *Pleioblastus* kinds are invasive and it is better to avoid their planting in small gardens.

The *Phyllostachys* kind has less invasive species, but the height reached by its kinds make it difficult to protect against the cold winds. The *Arundinaria murielae*, *Phyllostachys aurea, Pleioblastus variegates* and *Sinarundinaria nitida* are species with a highly appreciated foliage. But we ought to plant them in sheltered places.

In the gardens considered walking gardens, the moss is to be found everywhere. The severe drought during the summertime can make the maintenance of the moss quite difficult. It needs to be watered by spraying water, to compensate for the lack of rain. A compromise can be the use of *Soleirolia soleirolii*, a turf.

The climbing plants mostly used are and *Wisteria sinensis*. The later one needs to be trimmed carefully, both in summer and in winter, after they blossom, to get an abundant inflorescence.

The Japanese tradition preferssubtle green tones, but flowering trees and shrubs are used. Of the grassy plants, the anemones, the *Aster* species and chrysanthemums are preferred.

The distribution of vegetation must be done in such a way as to re – create nature. Another important symbolic aspect to be considered is the presence of the vegetation that has to mark the passing of the seasons, an essential cycle which is a symbol of life in itself. The vegetation in a Japanese garden must represent

spring (which corresponds to birth and youth), with shrubs that blossom in spring, summer (adult life), with falling species, autumn (old age) represented by the colours of the falling foliage, and, finally, winter, with long – lasting shrubs and trees, symbol of immortality and reincarnation.

The used species are well – known, being grown all over the world. The density, the diversity, the way they are combined create an exotic atmosphere and give a feeling of escape.

The water source must look like part of the natural surroundings, except for the traditional fountains. The meanders created by man must be winding and with irregularities as to look natural. The lanterns are often placed near a pool, as they represent the feminine and the masculine, water and fire.

There are two kinds of pools, the ornamental ones, *kazari – chozubachi*, placed next to the pavilion, and others, specific to the tea gardens, *tsukubai*.

The presence of the water evokes life. Thus, the source is a symbol of birth, a stream – a symbol of childhood, a pool or a fall – adolescence, and a swamp – old age. Ideally, the water runs from east towards south, then goes towards west, the curve thus created becomes the body of a dragon.

The third important element is the rock, which in the Japanese faith is invested with spirit. There are a great many ways to use rocks: for bridges, for pools, for falls, for alleys, for creating different symbols (a frog) or for their own beauty (in the case of dry gardens).

The specific paths, sometimes called "stepping stones" come originally from the tea ceremony. They have been created for not walking on the grass or moss and for redirecting the attention towards a specific visual experience. They often use granite other rocks, or even wooden pieces, to compensate for their lack. In the case of using pebbles, that have been fetched from somewhere else, the juxtaposition among the existing rocks must be made naturally. The natural rocks fetched from far away places must be carried carefully, as not to damage the marks made by time on them.

In the case of dry gardens, each pebble is places according to its unique shape and size; some are placed horizontally, while others are places vertically. Thus the symmetry in arranging pebbles is a common thing in the Japanese trees. In most cases, there is an odd number of pebbles and the most common shape of their arrangement is the triangle. The Japanese pay a great deal of attention to the harmony in arrangements which should give birth to **chi** energy [2].

The distinctive discretion of the Japanese architecture comes from respecting the three criteria of the so-called *zen*: *wabi*, the tranquility, the peacefulness, the bliss, *sabi*, the age patina, what has been lived, experimented, and *karumi,* the easiness, discretion, tact [3].

CONCLUSIONS

The most important elements in a Japanese gardens are vegetation, rocks, water; the art is the way these elements are put together.

The traditionals species used in a Japanese garden are damaged in our climate conditions.

The use of rocks are made by strictly rules.

The distinctive discretion of the Japanese architecture comes from respecting the three criteria: *wabi*, *sabi*, and *karumi*.

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NATURAL LANDSCAPE Vs. CULTURAL LANDSCAPE: AN ECOSEMIOTICAL APPROACH

PEISAJUL NATURAL VS. PEISAJUL CULTURAL: O ABORDARE ECOSEMIOTICA

PANZARU OLGA
University of Agricultural Sciences and Veterinary Medicine Iaşi

Abstract: *In the human transformations of the landscape lies a history of cultural activity far more pervasive than we usually realize. These alterations of the landscape assume patterns that have been guided by habits and local traditions, as well as by broader social and technological trends. When human activities have developed in a certain area, the landscape has become more and more organized. Landscape organization implies a concentration of its natural characteristics, an integration of natural elements with those created by man, the emergence of complex structures and forms, entirely produced by human beings. According to its broad conception, cultural landscape is that landscape or area bearing the imprint more or less of human activity, and it can be characterized as the outcome of an encounter between culture (understood in a general manner as human activity) and nature. We witness how cultural landscape has been replacing more and more significantly the natural landscape. Ecosemiotics or ecological semiotics is a new science, whose semiotic field is at the crossroads of nature and culture, being most closely related to the neighbouring academic fields of biosemiotics, cultural semiotics, environmental aesthetics, visual arts and hermeneutics .The special focus of this new interdisciplinary science is on the way signs and processes of semiosis determine the way humans interact with their environment.*

Rezumat: *Implicarea omului in transformarea peisajului inconjurator presupune o actiune culturala indelungata si complexa. Moificarile aduse peisajului sunt generate atat de obiceiurile si normele traditionale locale cat si de evolutia sociala si tehnologica a umanitatii. Pe masura ce activitatea omului se dezvolta intr-o anumita zona, peisajul devine din ce in ce mai organizat. Organizarea oricarei zone poate atrage dupa sine o concentrare a caracterului peisajului sau natural, o integrare a elementelor naturale cu cele construite de om, sau crearea unui complex de spatii si forme produse in intregime de om. Conceptul de peisaj cultural se refera la acel peisaj sau zona care poarta intr-o masura mai mare sau mai mica amprenta actiunii omului si in care elementele culturale se imbina in mod armonios cu cele naturale . Asistam la o inlocuire treptata, din ce in ce mai evidenta a peisajului natural cu cel cultural. Ecosemiotica sau semiotica ecologica este o stiinta noua, aflata la punctul de intersectie dintre cultura si natura, fiind inrudita cu biosemiotica, semiotica culturii, estetica mediului inconjurator, artele vizuale, si hermeneutica . Acasta noua stiinta interdisciplinara isi focalizeaza atentia asupra studiului semnelor si proceselor semice prezente in interactiunea omului cu mediul inconjurator.*

In this paper the author attempts to demarcate the specifics of ecosemiotics, or semiotic ecology, to describe and classify some of its main problems, and to introduce several concepts using its specific perspective. The aim of the research was to study man's relationship with the environment, proceeding from the practice of *signification*: how does man define and signify his surroundings. The semiotic aspects of human-nature relationships are of great importance everywhere, and these, particularly, are still not sufficiently taken into consideration or understood. Therefore, without understanding the semiotic mechanisms which determine the place of nature in different cultures, one has little hope of solving many serious environmental problems, and of finding the stable place of culture in nature.

MATERIAL AND METHOD

The notion *landscape*, if we treat it as a complex phenomenon, encompassing its mythological background, its ecological, geo-historical and cultural parameters as well as immaterial factors, the ways and levels of its mental perception, is one of the focal points of those traditions, shared values and views that constitute our links with the world around us, our personal, human and national identity.

The idea of cultural landscape often evokes the thought of some sort of investigation of the human and cultural with the natural, the land. The human contribution to the landscape is thought to be constructive and consistent with nature's own conditions and processes. The land and the things that are natural to it have in turn helped to determine the manner in which the human or cultural element has manifested itself. In short, the idea of cultural landscape is often taken to be the idea of the landscape in which culture and nature meet and interact on compatible terms.

Different academic fields and disciplines emphasize different characteristics of cultural landscapes that make such landscapes valuable. The cultural or local historian may consider the landscape valuable for its manifestation or evidence of cultural heritage; the biologist or landscape ecologist will emphasize the area's biological characteristics as worth preserving. Others find certain cultural landscapes worth preserving because of aesthetic, educational or recreational values. Common to these approaches is the view of the cultural landscape as something valuable to the extent that it imposes certain obligations regarding the manner in which people relate to it. In other words, the underlying concept of cultural landscape is "value- laden".

The special focus of ecosemiotics is on the way signs and processes of semiosis determine the way humans interact with their environment. By *semiosis* we mean any form of activity, conduct or process that involves *signs* including the production of *meaning*.

Ecosemiotics also raises the question of the semiotic threshold: what are the semiotic and the nonsemiotic aspects of our natural environment? Is semiosis always or only sometimes involved in the interaction of humans with their environment? What is the role of natural and cultural signs in the environmental semiosis?

Ecosemiotics can be defined as the semiotics of relationship between nature and culture. This includes research on the semiotic aspects of the place and role of nature for humans, i.e. what is and what has been the meaning of nature for us, humans, how and in what extent we communicate with nature.

Ecosemiotics deals with the semiosis going on between a human and its ecosystem, or a human in one's ecosystem. In this, it can be related to ethnology and sociology of man-nature relationships, to environmental psychology and the anthropology of environment, which, although quite close to ecosemiotics, deal more with the comparative than the semiotic aspects of the problem.

Ecosemiotics can be considered as a part of the semiotics of culture, which investigates human relationships to nature which have a *semiosic* (sign-mediated) basis.

Ecosemiotics (or ecological semiotics) is the study of sign processes in the interaction of humans with their natural environment. This semiotic field at the crossroads of nature and culture is most closely related to its neighboring fields of biosemiotics, cultural semiotics, but *semiosis* in the relation between humans and nature is also of concern to aesthetics, the visual arts, literature, hermeneutics. Environmental studies are not a discovery of semioticians. Natural philosophy, hermeneutics, cultural history, or ecology proper have a long tradition in environmental studies, and more recently numerous other eco-disciplines have been founded, such as ecopsychology, eco-ethology, human ecology, or ecolinguistics. All of them have a specific focus on humans in the context of their environment.

There are two concurring terminologies used in landscape studies. The first uses such terms as *place* and *space*, the other *–natural* and *cultural landscapes*. In both approaches there is a notion of how humans turn one into the other

The environmental implications of culture are embedded in its very origins, for the word *culture* is etymologically derived from *agriculture* (Bensdorff 1998:133).While one must not read whole explanations into etymologies, the connections between agriculture and culture is a curious one. The kind of agriculture, that is, the methods of cultivation that are employed and the technology that is utilized, results in qualitatively different environments. In cultivating the land, agriculture domesticates the landscape, that is, makes it home.

Speaking less literally, farming enables human habitation to establish itself, binding people to place. When hunter-gatherers turn to cultivation, they begin to transform the landscape, turning it increasingly into a humanscape. And this results in different human environments through the influence of many factors, not the least of which is the local culture, which itself evolves out of local environment and human conditions.

In the human transformations of the natural landscape lies a history of cultural activity far more pervasive than we usually realize. These alterations of the landscape assume patterns that have been guided by habit and local tradition, as well as by broader social and technological trends, for the cultural landscape began to replace the natural one with the emergence of human society.

This human landscape of culture and history is embodied not only in cultivated fields but in places remote and wild. It appears not only in the bucolic countryside but in the forms of buildings and roadways as well. This cultural environment is found, moreover, not only in the physical configuration of our surroundings but also in sounds, smells, and substances that fill our ears and lungs and are absorbed deep into our bodies.

A physical interaction of body and setting, a psychological interconnection of consciousness and culture, a dynamic harmony of sensory awareness all make a person inseparable from his or her environmental situation. Traditional dualism, such as those separating idea and object, self and others, inner consciousness and external world, dissolve in the integration of person and place.

A new conception of the human being emerges as an organic, conscious, social organism, an experiential node that is both the product and the generator of

environmental forces. These forces are not only physical objects and conditions, in the usual sense of environment. They include somatic, psychological, historical, and cultural conditions as well. Environment is the matrix of all such forces. As part of an environmental field, we both shape and are formed by the experimental qualities of the universe we inhabit. People are embedded in their world, implicated in a constant process of action and response.

RESULTS AND DISCUSIONS

The landscapes differ from one another in terms of power relations, land use patterns with respective technologies, and values people attach to them. However, a new formation is always not able to erase everything that the previous one has created; it rather adds a new layer of artifacts.

As a result we can speak of a landscape as a memory that contains remains of past land uses, remembering past power relations, but it also contains a set of narratives told from generation to generation that largely determine the identity of a place or a landscape.

Vos and Meekes (1999) and Palang and Mander (2000) have distinguished different landscape types: *ancient landscapes* which were shaped by their first inhabitants; *estate landscapes* controlled by landlords; *private farm landscapes*, which seem to be the dream landscape for so many of us; *collective farm landscapes* as symbols of communist power; *post-modern landscapes* , where the urban is preferred to the rural, land use is hectic and identity is lost.

Regardless of terminology, it is still people who create the place .A place becomes a place only after it has been given a name; it gets a story (legend, history, etc.). And with the end of the story the place ceases to exist, it returns to its former state of being a space, or a cultural landscape becomes once again a (pseudo)natural landscape.

According to its broad conception, cultural landscape is understood in contrast to natural landscape, as a landscape or area "bearing the imprint more or less of human activity", or as "any landscape which is visibly influenced by human interference (Jones 1988:154).Conceived broadly, cultural landscape can be characterized as an outcome of an encounter between culture, understood in a general manner as human activity, and nature, without further specification of what the contribution or role of each in this encounter is.

Thus conceived, a cultural landscape is a humanly-affected environment, ranging from the drastically transformed industrial and urban environment, in which the signs of human activity are obvious, to rural areas where human activity is not so manifest.

A cultural landscape in the material sense is an individually identifiable area affected by human activity such that the area's history has had humans among its participants. For humans to be participants in an area's history, the area must be the arena of deliberate human activity. This does not, of course, mean that unintended or unforeseen effects of human activity are irrelevant to an area's being a cultural landscape. But such effects must be tied to deliberation which

somehow involves the area. Furthermore, the activity that makes the area a cultural landscape in the material sense is tied to social or communal or collective practices, aspirations and expectations.

According to its narrow conception, a cultural landscape is a humanly modified environment possessing certain qualifying characteristics. A narrow conception implies certain conditions regarding the cultural contribution to the landscape, as exemplified with the rural landscape characterized by traditional agriculture (Frislid 1990:13) or landscape characterized by ancient monuments or cultural relics (Jones 1991:240), to the exclusion of areas that are highly urbanized or areas submitted to forms of agriculture and forestry that in a short period of time have drastically altered the land's biological and ecological characteristics.

Typical cases of cultural landscapes narrowly conceived maintain ecological health and biological diversity and are somehow continuous over an extended period of time with the area's original ecological characteristics. Perhaps one way of distinguishing between broad and narrow conceptions of cultural landscape is to say that it is consistent with the broad conception that nature serves as a mere substratum, a recipient of human transformation, for the formation of the cultural landscape, whereas a cultural landscape in he narrow sense requires that nature through its conditions and processes somehow be a participant in its formation and development. Thus conceived, a cultural landscape is an ecosystem in its own right.

CONCLUSIONS

Both *culture* and *landscape* are notions which allow broad and metaphorical interpretations. Both notions can be examined within the framework of very different fields –among the authors we can find geographers, art historians, environmental aestheticians, semioticians and literary scholars. Such a wide range of authors accounts for the pluralism of viewpoints. However, certain common features and dominants can be distinguished among such pluralism: the creative relationship of human beings with their environment, the relationship between the environment and art and the relationship between landscape and representation.

The value and the meaning of the complex cultural landscape has a material foundation in human activity in relation to the features of the land. Meaning and value are an immaterial dimension of the cultural landscape. The meaning is created in co-operation between the senses, memory, imagination and thinking. The conception of cultural landscape in contrast to natural landscape suggests that only humanly- modified landscapes can have such a dimension.

One can distinguish three senses in which cultural landscape can be understood: the humanly modified landscape in the broad sense as any landscape that has the physical or visible marks of human activity, the humanly modified landscape in the narrow sense as a landscape where the marks of human activity

are subject to the land's limiting conditions, and the landscape in the immaterial or symbolic sense of influencing people's views of themselves, of their history and identity.

Generally, landscape is the part of the environment experienced by man. Landscape and the environment can be used as synonyms, they are never seen as opposed to man, but as including, penetrating, embracing him.

Nature is maternal to man, it is important that he belongs to nature. Culture and nature are in symbiosis. Man creates the environment, and the environment creates man.

Ecological knowledge is not sufficient to understand or .solve the ecological problems which humans face, since these are consequences of certain deeply semiotic and cultural processes, intertwined with ecological and biological ones. There exist different types of cultures, among them some which have been able to create balanced relationships with nature, and many others which automatically create environmental problems for themselves. Consequently, ecosemiotics seems to be a possibility for facing these most important, and most difficult challenges of the contemporary world.

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ASPECTS REGARDING THE VERTICAL DECORATING MODALITIES BY USING A PERGOLA IN GREEN AREAS

ASPECTE PRIVIND MODALITATILE DE REALIZARE A DECORARII PE VERTICALA PRIN FOLOSIREA DE PERGOLE IN SPATIILE VERZI

SANDU TATIANA, TROFIN ALINA- ELENA, BĂDEANUMARINELA, PATRAŞ ANTOANELA, STAN C.
University of Agricultural Sciences and Veterinary Medicine Iaşi

Abstract. *Pergolas are decorative constructions of different shapes: a pair of pillars or columns united in their upper ends with light liaison elements and they serve as support for climbing plant species in order to assemble the vertical decoration. The paper intends to present some pergola types, modalities for assembling them and the ornamental plant species that accommodate better for each pergola type. There are presented the modalities of pergola assembling, the material types from which they are manufactured and the best places to put a pergola, considering the place and their role in the composition. A very important step is choosing the plant species that can be used in vertical decorations; this paper is offering some variants of plant associations for each type of pergola, considering its location and purpose. Seven variants of pergolas are presented, realized from different or similar materials, of various sizes and shapes, which represent the support for the vertical decoration by using ornamental lianas in urban green areas.*

Rezumat. *Pergolele sunt construcţii decorative sub formă de perechi de stâlpi sau coloane reunite în partea superioară prin elemente uşoare de legătură şi servesc ca suport pentru plantele urcătoare în vederea realizării decorării pe verticală. Lucrarea îşi propune să prezinte câteva tipuri de pergole, modalităţile de realizarea a acestora şi speciile ornamentale care se pretează cel mai bine pentru fiecare tip de pergolă în parte. Se prezintă modalităţile de montarea a unei pergole, tipurile de materiale din care se confecţionează aceasta şi locul în care este indicat a se dispune pergolele, în funcţie de locul şi rolul lor în compoziţie. Deosebit de importantă este alegerea plantelor care pot decora pe verticală, lucrarea oferind variante de asociaţii vegetale pentru fiecare tip de pergolă, în funcţie de locaţia pergolei şi scopul amenajării acesteia. Sunt prezentate şapte variante de pergole realizate din materiale diferite sau asemănătoare, de dimensiuni şi conformaţii diferite care constituie suportul pentru realizarea decorării pe verticală prin folosirea lianelor ornamentale în spaţiile verzi urbane.*

Key words: pergola, green spaces, liana, vertical decoration

Pergolas are ornamental and utilitarian elements used in green spaces, allowing the construction of the vegetation bower, because they are made of climbing plants, full of volume, which thus cover the alleys and the terraces

against sunrays. The pergolas bring color and refinement to the areas where they are placed. They are those specific decorative elements of an arrangement that add value to the places meant for recreation, such as terraces or balconies.

Pergolas are placed on high areas, where they can be visualized and open beautiful perspectives.

It is best to build pergolas in a warmer climate area, with low frequency rainfall. There are at least two explanations for this increased popularity of the pergolas, because today we meet numerous prefabricated sets for pergolas, and the success the terrace's phenomenon encountered stimulated the need to have a shaded place to assure a link between house and garden.

MATERIAL AND METHOD

The materials used for the pergola's construction are, generally:

- natural wood; if we choose untreated, natural wood, we should have a rugged surface, which will better absorb paint, this combination resisting approximately ten years, that means twice better than a smooth surface.

- **treated wood**; submitted through different protection procedures (superficial carbonization against microorganisms, lacquer or paint applications for protections against exterior climate factors, water proof substances impregnation, antiseptically substances, fire proof covers etc.), the wood will resist better through time..

- wooden fiber; this cover type is realized by wooden fiber "linked" at heat and under pressure, combined with resin or wax. This finishing resists better than wood at temperature variations and and need less maintenance.

- plastic material; another material used for pergola's construction is plastic or, latter, PVC.. Because the PVC used for pergolas is protected against UV light, this aspect makes it immune to discoloration and so it does not need painting or other treatment. Because the colorant pigment is uniform distributed into the material, the scratches or the marks of some small mechanical shocks are almost invisible. The products are made of PVC 100% (unrecyclable) and thus they do not rot, deform, decompose, rust and they are not sensible to soil humidity, like wood, forged iron or masonry. Most of the PVC producers offer lifetime warranty for this material, and this means that, after installation, the only needing maintenance is to be washed with a water hose from time to time.

- **forged iron**; is a rarely used material, because it is not fit for any type of garden and needs repeated paintings. Usually, it is used for adosated pergolas, on block-building's terraces or balconies and rarely in gardens.

- **stone or bricks**; are used only for the construction of the vertical supports of the self-porting (traditional or oriental type) and are usually seen in the mountain houses' gardens.

The classic use of a pergola is the partial or entire masking of an alley, with a vertical structure covered in flowers and supports. The pergola can be placed against a wall or a green bush fence or it can be used as an element that limits an access area to a specific part of the garden. A modern use of pergolas is to create the frame of the terrace, which becomes nowadays a real outside chamber.

It is important to make sure that the construction material and the pattern are matching the house's and the garden's style – rustic pillars are decorative in a traditional environment, but they might look inappropriate in a more modern location. Furthermore, their structure must be resistant enough and well anchored in the ground

to cope with a big storm, especially because the pergola is covered with lianas and the weight of their stems, leaves, flowers and after that, fruits challenges a lot the resistance structure of the pergola.

RESULTS AND DISCUSSIONS

Considering their structure, meaning the structural content and auxiliary elements, the classification of the pergolas used in green spaces is the following: adosated pergolas; self-porting pergolas and modular self-porting pergolas.

Considering the construction type and their general aspect, pergolas can be: traditional; oriental; rustic and supported.

The traditional pergola is often an imposing structure, with brick or stone pillars that support strong wooden or iron girders, covered with climbing plants. For the gardens near houses, the best construction material is wood, even if metal built pergolas can be interesting in ultramodern scenery. The most recommended ornamental plants for this type of pergolas are lianas from the ornamental grape-wine plants' group *(Partenocissus tricuspidata*, *Ampelopsis aconitifolia* s.o.) as well as flower decorative species (*Campsis radicans*, *Clematis vitalba*, *Polygonum baldschuanicum* s.o.)

The oriental pergola is slightly different from the traditional one, in the binding mode of the horizontal and vertical elements. For the pergola to have an authentic oriental aspect, the transversal horizontal elements' ends must be up-curved, and the climbing plants recommended to be used for decorating it are species of oriental lianas: *Wisteria sinensis, Lonicera japonica, Parthenocissus tricuspidata* s.o.) (fig. 1 and 4).

Fig. 1. Oriental pergola

Fig. 2. Rustic pergola with roof

Rustic type pergola was long time used in the old gardens, especially for spontaneous climbing roses' species (*Rosa wichuraiana*, *R. multiflora* s.o.) but also for noble climbing roses' species from *Thea-Hibrida*, *Polyantha* and *Floribunda* groups (*Climbing Queen Elisabeth*, *Climbing Super Star*, *Royal Gold* breeds s.o.). (fig. 2). This structure is less resistant than other types, therefore it must be used a special waterproof glue and covered nails for the elements' binding. Also, it's good to add reinforcement props between the vertical pillars, to enhance the stability of the pergola.

The supported pergola can be used as kiosk, but lately it became preferred to enclose a terrace or only a part of it. It is a solid structure, leaned upon the wall with some girder's nails or by attaching the transversal elements on a horizontal wooden plaque, placed on the wall into the brick structure. (fig. 3.) Vertical decoration is recommended to be made with rustic lianas that assure the density of the vegetal material through their abundant leaves. (*Hederea helix*, *Parthenocissus quinquefolia*) and as well through flowers and fruits (*Lonicera periclymenum*, *Clematis x jackmannii*).

Fig. 3. Pergola with angular support

Fig. 4. Oriental pergola with roof

The adosated pergola is composed by three main elements:

- vertical elements (support) – are those frame elements, usually from wood or other materials as metal, stone, bricks or plastic materials. There are two elements for each sustaining pillar and for that, they are united with insurance screws. Keeping an equal distance between them is realized with wooden distance equalizer blocks that also connect these elements. In their lower part, the screws pass also through a metallic profile that facilitates the fixation into the soil or into the terrace's pavement.

- horizontal elements perpendicular to the vertical supports – are similar to the previous ones, and sometimes are made even from the same material. The fixation is made also with the insurance screws. At the opposite end, the elements are fixed in the same way to the vertical elements.

- transversal horizontal elements of the bowers and pergolas – are those structures that bind between them all the other elements. With their help it is realized a transversal rigid structure, becoming also more stable, even when it is "covered" with climbing plants. The fixation and the binding with the other components is identical, and the materials of these elements are the same as the one used for the perpendicular horizontal elements and sometimes, with the one used for the vertical supports. (fig. 5)

The adosated pergola can be decorated using ornamental leaves species (*Hedera helix* var. *discolor*, *Parthenocissus tricuspidata* var. *Lowii*), ornamental flower species (*Clematis x jackmannii "President"* – with big violet-blue flowers, *C. x jackmannii "Ville de Lyon"* – with big carmine red flowers, also the climbing roses species from *Polyantha* group(*Coral Dawn, Cordon Rouge, Golden Showers* s.o.).

The modular self-porting pergola is identical with the self-porting one, with the difference that between the vertical elements, along the alleys or terraces where they are placed, there are wooden cross-bared panels, metallic nets or plastic materials nets, and in the lower part, benches or resting chairs can be included. (fig. 6).

Fig. 5. Adosated simple pergola

Fig. 6. Simple modular pergola

CONCLUSIONS

1. Pergolas are decorative elements, but not only that, which create an area of gradual and personalized passing, from the exterior to inside, underline the recreational outside places, offering an intimate frame or underlining the main house entrance, personalizing a terrace or a balcony etc.

2. The materials used for pergolas are: natural wood, treated wood, wooden fiber, PVC (plastic material), stone, bricks, forged iron, s.o.

3. A pergola can be placed near a wall or a green bush fence or it can be used as an element that limits an access area towards a specific part of the garden; a modern use of pergolas is to create the frame for a terrace.

4. Considering the construction mode and the general aspect of the pergolas there are: traditional pergola, oriental pergola, rustic pergola, supported pergola, adosated pergola, self-porting pergola, modular self-porting pergola, s.o.

5. The ornamental species recommended for decorating the pergolas are chosen considering the modality of fulfilling the decorative function, through leaves, flowers or fruits, but also considering the decorative period, trying to phase it for a long period. We recommend the liana species from the ornamental grape-wine group *(Partenocissus tricuspidata*, *Ampelopsis aconitifolia* s.o.), flower and fruit decorative species (*Campsis radicans*, *Clematis vitalba*, *Polygonum baldschuanicum*, *Wisteria sinensis, Lonicera japonica, Lonicera periclymenum*, *Clematis x jackmannii* s.o.), climbing roses, spontaneous species (*Rosa wichuraiana*, *R. multiflora* s.o.) or noble climbing roses from *Thea-Hibrida*, *Polyantha* and *Floribunda* groups, s.o.

6. Most of the decorative liana species have known lately a great diversification, through enhancing the decorative features and creating numerous breeds, varieties and hybrids that can assure all the requirements and pretences in the vertical decorations' field.

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THE ANALYSIS OF SPECIALIZED PROFILE GREEN SPACES FROM INSIDE IASI

ANALIZA SITUAȚIEI SPAȚIILOR VERZI CU PROFIL SPECIALIZAT DIN MUNICIPIUL IAŞI

SANDU TATIANA [1], ALINA TROFIN[1]
CARMEN LAMBAN[2], R.BERNARDIS[1]
[1]University of Agricultural Sciences and Veterinary Medicine Iaşi
[2]Research and Development Station for Fruit Tree Growing Iasi

Abstract. *The actual surface of Iasi is 3770 ha, from which the cultivated green spaces (with unlimited, limited or specialized profile access) occupy approximately 827 ha (22%). The specialized profile green spaces occupy 294,1 ha, from which 103,8 ha belong to the Botanical Garden, 2,3 ha are occupied by the Zoological Garden, 13,6 ha for sport parks, 113,8 ha for cemeteries, 39,4 ha are plantations for sustaining the slopes, 12 ha are occupied by tree nurseries and 9,2 ha are protection plantations for the water sources. This paper proposes to analyze, from the structural and functional point of view, these surfaces of specialized profile green spaces, observing and emphasizing their positive and negative aspects. The favorable combination of green spaces with constructed perimeters, with the main transportation lines, industrial platforms but also with residential areas, yet having a high potential of expanding the green spaces represents an appreciated solution for recovering Iasi's previous charm.*

Rezumat. *Suprafața actuală a municipiului Iasi este de 3770 ha, din care, spațiile verzi plantate (cu acces nelimitat, cu acces limitat şi cu profil specializat) ocupă cca. 827 ha (22%). Spațiile verzi cu profil specializat dețin 294,1 ha, din care 103,8 ha aparțin Grădinii Botanice, 2,3 ha ocupate de Grădina Zoologică, 13,6 ha pentru parcuri sportive, 113, 8 ha sunt ocupate de cimitire, 39,4 ha sunt plantații de consolidare a versanților, 12 ha sunt ocupate de pepiniere iar 9,2 ha sunt plantații de protecție a surselor de apă. Lucrarea îşi propune să analizeze din punct de vedere funcțional şi structural aceste suprafețe de spații verzi cu profil specializat, urmărind evidențierea aspectelor pozitive şi negative ale acestora. Îmbinarea fericită a spațiilor verzi cu perimetrele construite, cu principalele fluxuri de transport, platforme industriale dar şi zone rezidențiale, având potențialul încă ridicat de extindere a spațiilor verzi, reprezintă o soluție apreciată pentru regăsirea farmecului de odinioară al municipiului Iasi.*

Key words: green spaces, gardens, parks, specialized profile.

Into the specialized profile green spaces' category enter: botanical gardens, dendrology parks, rose gardens, zoological gardens and parks, exhibit area parks, cemeteries green spaces, plantations for slope support, nurseries and protection plantations for the water sources.

In this paper we want to present as detailed as possible the situation of this category of specialized profile green spaces, analyzed from a structural and functional point of view in order to emphasize their positive and negative aspects.

MATERIAL AND METHOD

The analysis of the territory around Iasi was conducted between May 2006-October 2007, by visual monitoring the actual status of the specialized profile green spaces areas from Iasi and the surroundings; more complex observations were made in cooperation with the specialists from Tree Research and Development Center Iasi, as part of a larger project.

The acquired and processed data were used for structuring the results regarding the vegetal carpet's composition, its health status and its placement into the Iasi's close perimeter in order to draw some conclusions in what concerns the areas with specialized profile green spaces and their actual status, pieces of nature altered enough by the human activity in the studied area.

RESULTS AND DISCUSSIONS

In the administrative territory of Iasi, the function of specialized profile green space is assured by the following green spaces:

1. Botanical Garden Iasi. Is a multiple function institution (didactic, scientific, cultural-recreational, hygienically-sanitary and for preserving the spontaneous plant species genetic stock) with a surface of 103.80 ha, representing an important green area in the northwestern side of Iasi, with an obvious role of support and protection against erosion on a soil otherwise liable to slip, also with a role of protecting the mineral water sources (in present intensively exploited) and climate protection against strong winds and excessive temperature.

This objective is always present on the list of the visitors coming to Iasi, having a benefic influence, of ecological education for everybody, becoming a reference place for this town. Also, the agreement function of this green space increased lately.

In essence, Botanical Garden Iasi represents an artificial ecosystem but with naturalization trends, in which the biotope (soil conditions, microclimate) is systematically improving and the biocenosis (vegetal and animal communities) are constantly enriching. (Leocov, M., Lupu, I.A., 1988).

The Botanical Garden's mixed vegetal carpet is herbaceous in proportion of 35% and ligneous in proportion of 65%, the ligneous species having an average height of approximately 15 m. In its ensemble, this botanical garden's vegetation induces to the visitor a sedative – relaxing influence against the every day stress, but also has some exciting – soliciting influences.

The multitude of landscapes, interchangeable, has a strong comforting action on the visitor through variations of shapes and volumes, through colors and scents.

Botanical Garden Iasi represents a semi natural ecosystem but also an important green space in the northwestern side of Iasi, highly cherished by the locals and not only.

2. Sport parks. The sport parks from inside Iasi occupy a cumulated surface of 13.6 ha, that is approximately 1.7 % from the sum of town's green spaces. The biggest part of this surface (12.3 ha) is herbaceous, asphalted or covered with cinder and the rest of it (1.3 ha) is planted as perimeter green curtains. These curtains' composition contains: 0.3 ha – resin trees, 0.7 ha – deciduous trees and 0.3 ha deciduous shrubs. The trees / shrubs ratio is 0.77 / 0.23 and the deciduous / resin trees ratio is 0.7 / 0.3. The most representative sport parks from inside Iasi are: „Emil Alexandrescu" City Stadium, „Constructorul" Stadium, „Tineretului" Stadium, „Penicilina" Stadium and „Tepro" Stadium. From all these, the most important is „Emil Alexandrescu" City Stadium, with a surface of 5.67 ha, from which the perimeter shrub green curtain occupies 1.08 ha, made of deciduous trees in proportion of 90%. The most valuable existing specie in this perimeter is the black American nut tree (*Juglans nigra*) which is perfectly accommodated here and realized considerable growths. The estimated necessary capacity for a city like Iasi is of approximately 30 ha of sport parks, noticing thus an existing deficit of almost 16 ha, which, unfortunately, underlines extremely well the increased lack of interest of the modern society for sports and related activities.

3. Zoological Garden. Placed at approximately 2.5 km south from the town border, into the frame of a separate body and with a surface of almost 2.3ha, the zoological garden does not accomplish the function it was created for. Thus we will mention the green space inside, with a surface of 1.70 ha, occupied by ligneous plants in the following proportions: 1.20 ha - deciduous trees and 0.50 ha - deciduous shrubs.

4. Cemeteries green spaces. The conducted studies show that in Iasi there was once an old Israeli cemetery in Ciurchi zone (Cihodaru, C., Platon Gh. şi col., 1980), and also a Turkish cemetery in Sărărie zone (mentioned in old documents from 1735). The cemeteries functioning today are: Eternitate (27 ha) Sf. Petru and Pavel - Eternitate extension (22 ha), Păcurari and Sf. Treime (26 ha), Sf. Vasile (8 ha), Buna Vestire (10 ha), Evreiesc (14 ha), Bucium (2.5 ha), Socola – Neuropsychiatry Hospital (0.5 ha), Copou - Sf. Atanasie and Chiril (1.5 ha). The sum of cemeteries surfaces from Iasi is of 113.8 ha.

The cemeteries' ligneous vegetation represents 11.40 ha from which: 2.30ha – resin trees, 4.10 ha - deciduous trees, 3.20 ha resin shrubs and 2.70 ha deciduous shrubs. The trees/shrubs ratio is 0.56 / 0.44, and the deciduous / resin species ratio is 0.60 / 0.40. The actual cemetery surface administered by Iasi council (app. 114 ha) covers the necessary for a town of Iasi's size, extensions being unnecessary.

5. Plantations for land support. It is well-known the fact that Iasi is placed in a region with lands liable to slip, because of the clay-marl under layer from the Sarmatia age and of the aquifer layers extremely uneven spread. (Barbu,

N., Ungureanu Al. şi col., 1987). These studies concluded that inside Iasi's actual perimeter there were many land slipping episodes through time, though the actual situation is relatively good, the active slipping lands being restrained as surface, in favor of the stabilized or going to be stabilized ones. As an effect of ligneous plantations for supporting the slopes we can admit that the old slipping episodes stopped on the western side of „La Cosari" Hill and on Manta Roşie Valley. Another effect of plantations for supporting the slopes is the action for stabilizing the land slipping areas from Cetățuia, Galata and Ciric.

Also, through the conducted stabilizing measurement complex, including trees and shrubs plantations, we consider solved the problem of land slipping from Râpa Galbenă and Groapa lui Vodă (on the left bank of Cârlig creek). Inside Iasi city, the plantations for supporting the lands liable to slip or to form torrents are spread on 39.4 ha, including 4 ha resin trees (*Pinus sylvestris* and *Pinus nigra*), 27.4 ha deciduous trees (mainly *Robinia pseudacacia*) and 8 ha deciduous shrubs. The trees / shrubs ratio is 0.8 / 0.2 and the deciduous / resin species ratio is 0.9 / 0.2.

We need to mention the following aspects: in time, the role of ligneous plantations proved benefic in supporting the unstable lands; the land surface with supporting role is not sufficient in Iasi city, therefore there must be studied the five zones affected by slipping during 1969 - 1974 in order to establish a program of prevention measures for the close future.

6. Tree nurseries. The nurseries in Iasi show a deficit, the only town nursery is the one from „Moara de Vânt" with a surface of approximately 12 ha which includes, in the cultivated space: 1.2 ha with resin trees, 6 ha with deciduous trees (including seedlings selection facilities) 1.2 ha resin shrubs and 3.6 ha deciduous shrubs. The trees / shrubs ratio is 0.6 / 0.4 and the deciduous / resin species ratio is 0.8 / 0.2.

This nursery can't cover, quantitative and qualitative, the local demands for tree cultivar material; there are also 5 private nurseries, but most of them are in fact importers, not producers. The City Public Service Iasi searched possibilities for establishing another town nursery, the most probable location being outside town's perimeter, nearby the former Heavy Hardware Combine.

According to standards, the nursery necessary for a town like Iasi is of 30 ha, that leaving a deficit of almost 18 ha.

7. Water sources protection plantations. This category includes the planted spaces surrounding the water reservoirs Păcurari, Aurora, R.A.J.A.C. Company, I.C.H.V., Şorogari etc., the occupied surface being of 9.20 ha. The biggest part of this surface is the green space from the R.A.J.A.C. Company, of almost 1 ha, which was once a part of „ Ghica Vodă Promenade „ from Copou. In present, there are 43 taxons, from which 21% are resin species and 79% are deciduous species, and the percentages of trees and shrubs are: 58% trees - 42% shrubs.

In ensemble, the green spaces for water sources protection occupy a surface of 8.2 ha with ligneous plants and 1 ha with herbaceous species. It is necessary to

maintain and may be extend this surface once the existing reservoir are expanding or new ones appear.

For„ Chirița Lake" water source protection is necessary to assure a perimeter plantation of minimum 500 m wide, what means a planted surface of almost 240 ha.

The conducted analysis on these categories of green spaces from inside Iasi emphasizes the fact that for all green space categories the total necessary capacity is of 1684 ha, noticing a deficit of 857 ha, bigger than the existing green space surface which covers 827 ha.

It is imperatively necessary to establish other green spaces inside the Iasi city borders, therefore the local City Council approved „The National Program for improving the environment quality by implementing green spaces inside the urban area", initiated in 2007. Thus, the local municipalities in Iasi proposed creating four new green spaces, three of the proposed zones being situated in Dacia zone and one in Țigarete zone. A financial contract is desirable to be accessed: "*Environmental fund for the national program of improving the environment quality by establishing new green spaces*".

CONCLUSIONS

1. The paper realized an analysis of the specialized profile green spaces from inside Iasi, represented by: Botanical Garden, former Zoological Garden, cemeteries green spaces, plantations for land support, tree nurseries and green spaces for water sources protection.

2. Botanical Garden Iasi is „the happiest" example of specialized profile green space, representing an important green area in the northwestern side of Iasi, with an obvious role of support and protection against erosion on a soil otherwise liable to slip, with an obvious role of support and protection against erosion on a soil otherwise liable to slip, also with a role of protecting the mineral water sources (in present intensively exploited) and climate protection against strong winds and excessive temperature.

3. The estimated necessary capacity for a city like Iasi is of approximately 30 ha of sport parks, noticing thus an existing deficit of almost 16 ha, which, unfortunately, underlines extremely well the increased lack of interest of the modern society for sports and related activities.

4. The actual cemetery surface administered by Iasi council (app. 114 ha) covers the necessary for a town of Iasi's size, extensions being unnecessary.

5. The conducted studies underlined the fact that there is a deficit of plantations for slope support of approximately 21 ha, the existing land surfaces with a support role inside Iasi being not sufficient, therefore there must be studied the five zones affected by slipping during 1969 - 1974 in order to establish a program of prevention measures for the close future.

6. According to standards, the nursery necessary for a town like Iasi is of 30 ha, that leaving a deficit of almost 18 ha.

7. In what regards water sources protection, it is the same deficiency; in this case the deficit is of almost 11 ha.

8. The conducted analysis on these categories of green spaces from inside Iasi emphasizes the fact that for all green space categories the total necessary capacity is of 1684 ha, noticing a deficit of 857 ha, bigger than the existing green space surface which covers 827 ha.

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Consilier editorial: **Vasile VÎNTU**

Tehnoredactori: **Pavel ACOSTĂCHIOAIE**
Marius DASCĂLU

Corectori: **Gică GRĂDINARIU**
Lucia DRAGHIA

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