

“D. BRANDZA” BOTANICAL GARDEN NURSERY FROM BUCHAREST PRESENT AND FUTURE REFERENCES

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Abstract: As the continuous demography registered during the last decades of the last century increases, the population on the Earth reached alarming levels due to the increasing needs of the population in continuous increase on the one hand and on the other hand, due to the human intervention in larger areas of the Earth. This continuously increased ominous anthropic influence, that attracts also the limitation of the planetary resources of all kinds, conducted during the last years to the unanimous recognition of the fact that the plants have the status of vital element within the world natural heritage, being a main element for maintaining the life on Earth and representing at the same time an essential resource for the future, for the planet existence (Convention on Biological Variety, 1992; The Declaration from Grand Canaria on World Program for Plants Preservation, 2000).

Key words: nursery, trees, wooden plants, lianas, bushes.

In the context of the above-mentioned ideas, the role that the botanical gardens play at present increased significantly, and the range of the developed activities diversified. Thus, a current botanical garden, regardless its type, has to play a key role in the activities of plant species identification and monitoring (inventory, mapping, monographs, database, rapid evaluation of phyto-variety), *in situ* preservation (protected areas, the management of plant populations, the biotope rehabilitation), *ex situ* preservation of their diversity (seeds culture, collection of rare and threaten with extinction plants, multiplied “in vitro” within the reproduction programs), research and environment education (systematic, anatomy, techniques of *in situ* and *ex situ* preservation, the management of the vegetal natural resources, environment legislation), information sharing, technical and scientific cooperation, etc.

Traditionally, the botanical gardens involved mostly in the *ex situ* preservation activities, based especially on the creation and maintenance of the collections of living plants and of the herbariums. The *ex situ* preservation involves a larger range of directions:

- the achievement of some special collections of living plants including rare or threaten plants, collections useful in researches of genetic variability, of reproduction and ecological biology;
- the establishment of some collection of native plants of economic importance (pharmaceutical, food, textile);
- using the species from the collections of living plants in the repopulation programs;
- the establishment of seeds cultures and tissues;
- the development of techniques and laboratories of cells and tissues cultures;
- the identification and promotion of the educational values of these aspects;
- joining the *in situ* and *ex situ* preservation activities.

The role of “framework” within the structure of the most botanical gardens is ensured by the wooden plants (trees, bushes, lianas).

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The trees occupy, in general, the largest land surface from the total surface of a botanical garden. The same situation is in “D. Brandza” Botanical Garden from Bucharest.

“D. Brandza” Botanical Garden Nursery was designed initially only as a reserve of wooden species and functioned for many years only for ensuring the young vegetal material, necessary for replacing the old trees and the trees existent in the garden and for creating again various sectors in the open space of the garden.

Due to the major changes in the global policy during the last years regarding the biovariety and the preservation of the biovariety, this sector of the Botanical Garden has to integrate into the present new tendencies.

In this regard, the role of the Nursery increased in the general context of the Botanical Garden, and the activities developed in this sector enhanced significantly.

First of all, having in view the need to develop the micro-production as partial self-financing base of the Botanical Garden, at present the nursery is under rearrangement. Thus, closed, protected spaces for the reproduction of the valuable species of wooden plants are under arrangement and large spaces were allotted and arranged for the reproduction of some species of trees and bushes (*Paulownia tomentosa* (Thunb.) Steud., *Albizia julibrissin* Durazz., *Tilia platyphyllos* Scop., *Gleditschia triacanthos* L., *Hibiscus syriacus* L., *Callicarpa bodinieri* Levl. var. *giraldii* Rehd., *Buxus sempervirens* L., *Euonymus europaea* L., *Spartium juncem* L. etc.) destined to the utilization through commercialization.

Besides this new role, which refers to the economic and financial aspect, “D. Brandza” Botanical Garden Nursery has another role, very important too, and this role is to involve directly in the repopulation programs, by the means of the collections of young plants, which are existent here.

The nursery will involve actively in the research programs by participating in the near future in developing a project of “in vitro” reproduction of some valuable wooden species. In this regard, a renovation and a corresponding reuse of the cold greenhouse related to the sector is foreseen.

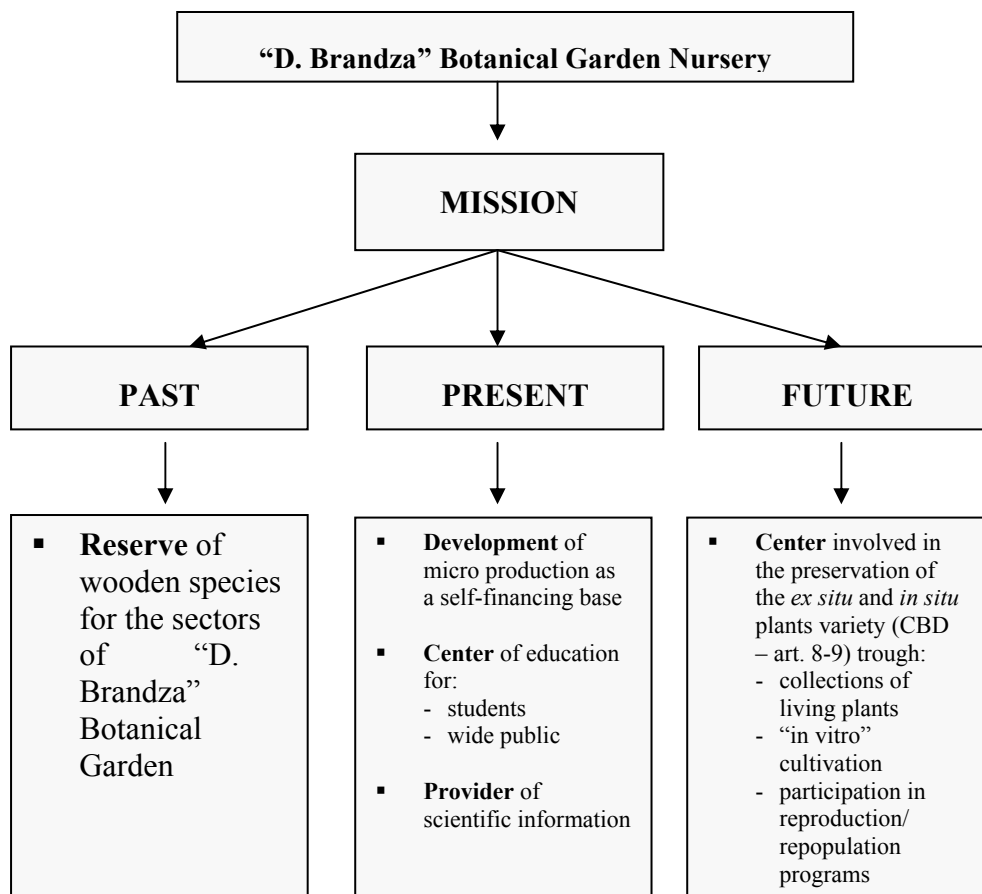
Another new mission of “D. Brandza” Botanical Garden is that of active involvement in education and information programs.

The nursery sector, with all its specialists is involved in the students training, providing them, during the summer practice period, the opportunity to gain new and correct scientific and practical knowledge on the way of reproduction, development and cultivation of various species of existent wooden plants.

The promotion of the botanical gardens as training centres for the specialists in horticulture (dendrology) is based, in general, on at least two significant arguments: the need to apply correctly the garden practices in maintaining the collection and the need to know and promote the horticulture (dendrology) as science and art.

At the same time, the dissemination of the information referring to the decorative plants (in our case wooden species) and the standards of their cultivation, support on the one hand their botanical value and on the other hand represent an additional stage in the environment education.

In order to support the above mentioned activities, an informative material (a leaflet) is under printing. The leaflet contains the description and certain specific features for the development and cultivation of some of the most important wooden species cultivated in “D. Brandza” Botanical Garden. In the future we want to continue this series of informative materials addressed to the wide public.



The major objective of “D. Brandza” Botanical Garden Nursery, as a component of this institution, is to respect and to integrate harmoniously into the European concept of botanical garden and into the new current background regarding the mission of the botanical gardens for the human society.

Bibliography

1. SÂRBU ANCA (coordonator) – *Asociația Grădinilor Botanice din România – Un pas spre integrarea europeană*, Ed. „Alo, București!”, București, 2001
2. SÂRBU ANCA (coordonator) – *Diversitatea plantelor în contextul strategiei europene de conservare a biodiversității (sinteze)* – cursuri postuniversitare elaborate în cadrul proiectului TEMPUS-Phare IB-JEP 14030, Ed. “Alo, București!”, București, 2001
3. DIMITRIU-TĂTĂRANU I. și colab. – *Arbori și arbuști forestieri și ornamentali cultivați în R.P.R.*, Ed. Agro-silvică, București, 1960
4. CIOCĂRLAN V. – *Flora ilustrată a României, ediția a II-a revizuită și adăugată.*, Ed. Ceres, București, 2000

“D. Brandza” Botanical Garden Nursery
List of trees, brushes and lianas

1. *Acer negundo* L.
2. *Aesculus carnea* Hayne
3. *Aesculus hippocastanum* L.
4. *Aesculus octandra* Marsh.
5. *Ailanthus altissima* (Mill.) Swingl.
6. *Albizia julibrissin* Durazz.
7. *Amelanchier ovalis* Med.
8. *Amorpha fruticosa* L.
9. *Ampelopsis aconitifolia* Bge.
10. *Berberis julianae* C.K. Schneid.
11. *Berberis vulgaris* L.
12. *Betula verrucosa* Ehrh.
13. *Buddleia japonica* Hemsl.
14. *Buxus sempervirens* L.
15. *Callicarpa bodinieri* Levl. var. *giraldii* Rehd.
16. *Calycanthus occidentalis* Hook. & Arn.
17. *Campsis radicans* (L.) Seem.
18. *Catalpa bignonioides* Walt.
19. *Cercis siliquastrum* L.
20. *Clematis jackmani* Th. Moore var. “Bagatelle”
21. *Clematis tangutica* (Maxim) Korsh.
22. *Clerodendron bungei* Steud.
23. *Cotoneaster horizontalis* Dene.
24. *Deutzia scabra* Thunb.
25. *Euonymus europaea* L.
26. *Euonymus fortunei* (Turcz.) Hand. – Mazz.
27. *Ficus carica* L.
28. *Forsythia intermedia* Zbl.
29. *Forsythia viridissima* Lindl.
30. *Fraxinus excelsior* L. var. “pendula”
31. *Ginkgo biloba* L.
32. *Gleditschia triacanthos* L.
33. *Gymnocladus dioica* (L.) K. Koch.
34. *Hedera helix* L.
35. *Hibiscus syriacus* L.
36. *Hibiscus moscheutos* L.
37. *Juniperus horizontalis* Mnch.
38. *Kerria japonica* (L.) DC.
39. *Koelreuteria paniculata* Laxm.
40. *Lagerstroemia indica* L.
41. *Lavandula officinalis* Chaix.
42. *Ligustrum vulgare* L.
43. *Liriodendron tulipifera* L.
44. *Lonicera brownii* (Rgl.) Corr.
45. *Lonicera caprifolium* L.
46. *Lonicera pileata* Oliv.
47. *Lonicera tangutica* Maxim.
48. *Magnolia kobus* DC.
49. *Magnolia soulangeana* Lindl.
50. *Mahonia aquifolium* (Pursh) Nutt.
51. *Morus alba* L. var. “pendula”
52. *Parthenocissus quinquefolia* (L.) Planch.
53. *Parthenocissus tricuspidata* (S. & Z.) Planch.
54. *Paulownia tomentosa* (Thunb.) Steud.
55. *Periploca graeca* L.
56. *Philadelphus coronarius* L.
57. *Platanus acerifolia* Willd.
58. *Polygonum baldschuanicum* Rgl.
59. *Populus alba* L.
60. *Prunus mahaleb* L.
61. *Prunus serrulata* Lindl.
62. *Prunus triloba* Lindl.
63. *Ptelea trifoliata* L.
64. *Pyracantha coccinea* Roem.
65. *Quercus borealis* Michx. f.
66. *Rhus typhina* L.
67. *Salvia officinalis* L.
68. *Sophora japonica* L.
69. *Spartium junceum* L.
70. *Spiraea bumalda* Burv.
71. *Spiraea salicifolia* L.
72. *Spiraea vanhouttei* (Briot) Zbl.
73. *Syringa vulgaris* L.
74. *Tamarix ramosissima* Ldb.
75. *Taxodium distichum* (L.) Rich
76. *Thuja orientalis* L.
77. *Tilia platyphyllos* Scop.
78. *Ulmus montana* Stokes. var. “pendula”
79. *Viburnum carlesii* Hemsl.
80. *Viburnum rhytidophyllum* Hemsl.
81. *Vinca major* L.
82. *Vinca minor* L.
83. *Wisteria sinensis* (Sims.) Sweet.
84. *Zizyphus jujuba* Mill.



Calycanthus occidentalis Hook. & Arn.



Campsis radicans (L.) Seem.



Clematis tangutica (Maxim) Korsh.



Hibiscus moscheutos L.



Hibiscus moscheutos L.



Hibiscus syriacus L.



Magnolia soulangeana Lindl.



Wisteria sinensis (Sims.) Sweet.



Prunus triloba Lindl.