



Botanical approach for Cultural Heritage: Historical Garden and Archaeological Park.

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Italian-French Bilateral Cooperation in Heritage Science: “Human-centered approach for cultural heritage in green transition: disciplines talking to each other”

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Plant Blindness



the inability to see plants in the surrounding environment

What see?



The Botany for cultural heritage

The ECOLOGICAL CONTEXT IN WHICH THE WORK OF ART IS INSERTED must be considered.

To KNOW THE BIOLOGICAL AND ENVIRONMENTAL CHARACTERISTICS and, where possible, IDENTIFY THE CONDITIONS COMPATIBLE WITH THE OPTIMAL CONSERVATION OF THE ARTISTIC GOOD.



The Botany for Cultural Heritage

The Ministry of Cultural Heritage and Activities and Tourism published in the Guidelines on the technical-scientific criteria and on the functioning and development standards of museums.

A chapter is dedicated to defining the problems connected to the relationship between the works and the environment in which they are placed.



Knowledge of the meaning and structure of the **LANDSCAPE** of an archaeological area and a historic garden is important:

- to evaluate its real or potential danger
- to plan the most appropriate interventions for the conservation of cultural heritage, but also because this knowledge is useful for **CONSERVING THE LANDSCAPE ASPECTS OF NATURALISTIC VALUE, IF COMPATIBLE WITH THE ARCHAEOLOGICAL STRUCTURES.**



The interactions between archaeological and natural components:

- possible conflicts and to the dangerousness of some species on the architectural elements
- uncritical eradication of weeds can favor the acceleration of degradation while a controlled coexistence allows the protection of the crests of the walls and other parts of difficult conservation.



There are also numerous potentials that a careful and aware project of the plant component can develop in the design of an archaeological landscape, often characterized by
**PECULIAR ENVIRONMENTAL CONDITIONS WHICH GENERALLY FAVOR
BIODIVERSITY**

Biodiversity hot spot

Refugia



The SPAs together with the Sics constitute the Natura 2000 network conceived for the purpose of protecting European biodiversity through the conservation of natural habitats and animal and plant species of Community interest



Villa Pamphili, Rome



Villa Borghese, Rome



La Banditaccia, Cerveteri



Monterozzi, Cerveteri



Protecting monuments and plant biodiversity in archaeological sites: the case of the Etruscan necropolis of “Monterozzi” (Tarquinia, central Italy)



we detected 167 species, included in 39 families and 126 genera.

The floristic and vegetational assessment of the Monterozzi site revealed high plant biodiversity, with a still remaining naturalness and interesting features of relictuality.



Flora and vegetation in the “Monterozzi” site are strongly influenced by the weeding interventions carried out in the archaeological area.

As in other semi-natural environments, human impact can favour the development of valuable natural elements that need to be considered in the management of such areas, to guarantee their protection and balance the possible risks linked to plants growth and roots development.

Table 2. List of species with a conservation interest. Frequency is based on Anzalone et al. (2010) (RR = extremely rare; MR = very rare; PC = uncommon).

	Frequency (Latium)	Endemics	CITES	Latium Reg. Law
<i>Centaurea aspera</i> L.	MR			
<i>Crepis bursifolia</i> L.	PC			
<i>Crepis capillaris</i> (L.) Wallr.	RR			
<i>Hyoseris radiata</i> L.	PC			
<i>Linaria purpurea</i> (L.) Mill.		X		X
<i>Ophrys bombyliflora</i> Link			X	
<i>Ophrys tarquinia</i> P. Delforge		X	X	
<i>Serapias parviflora</i> Parl.	PC		X	



Figure 3. Orchids recorded inside the archaeological site. a) *Ophrys bombyliflora* Link; b) *Serapias parviflora* Parl.; c) *Ophrys tarquinia* P. Delforge.

NATURALISTIC VALUE OF ARCHAEOLOGICAL AREAS AND HISTORICAL GARDENS

Archaeological sites, in addition to their historical-artistic importance, often represent biotopes in which precious green areas are preserved which have escaped the incessant expansion of the urban fabric or agricultural exploitation

THE HIGH FLORISTIC BIODIVERSITY AND A CERTAIN NATURAL VEGETATION

WITHIN THE ROMAN ECOSYSTEM THEY HAVE BEEN RECOGNIZED AS ONE OF THE MAIN "HOT SPOTS" OF THE CITY FOR THE CONSERVATION OF URBAN FLORA
THE HIGH FLORISTIC BIODIVERSITY AND A CERTAIN NATURAL VEGETATION

SOME ARCHAEOLOGICAL SITES AND HISTORIC VILLAS ARE ALSO INSERTED IN A CONTEXT OF NATURALISTIC IMPORTANCE OR ARE THEMSELVES RECOGNIZED AS SITES OF IMPORTANCE

NATURALISTIC VALUE OF ARCHAEOLOGICAL AREAS AND HISTORICAL GARDENS

Considering the floristic richness found, the rarity, the naturalistic importance and the autoecological significance of some entities.

The correct consideration of the peculiarities of this flora in the context of the management policies that are adopted there for the conservation of the archaeological heritage.

IT IS ADVISABLE TO UNDERTAKE A COMPROMISE MANAGEMENT LINE THAT CAN SAFEGUARD THE MONUMENTAL INTEGRITY ON THE ONE HAND BUT ALSO THE FLORISTIC COMPONENT ON THE OTHER

- mowing and chemical weeding practices in a non-widespread way but according to a zoning that allows the most significant spontaneous flora to be protected. although it is compatible with the conservation of ancient remains, avoid chemical weeding. areas rich in vulnerable and/or rare entities could be selected, the extension of which will have to be calibrated according to the reproductive strategies of the species and archaeological needs
- Ulteriori informazioni su questo testo di origine Per avere ulteriori informazioni sulla traduzione è necessario il testo di origine In via commenti Riquadri



Historical Gardens

THE VENICE CHARTER 1964 underlines the character of historic gardens as works of art, recommending their «preventive and conservative restoration, respectful of the changes that the work has undergone over time»

THE FLORENCE CHARTER 1981 establishes a model of behavior with regard to historic gardens and their management.

Art. 1 the historic garden is defined as «an architectural and plant composition which from a historical or artistic point of view presents a public interest»

Art.2 underlines that «the historic garden is an architectural composition whose material is mainly vegetal, therefore living and as such perishable and renewable»

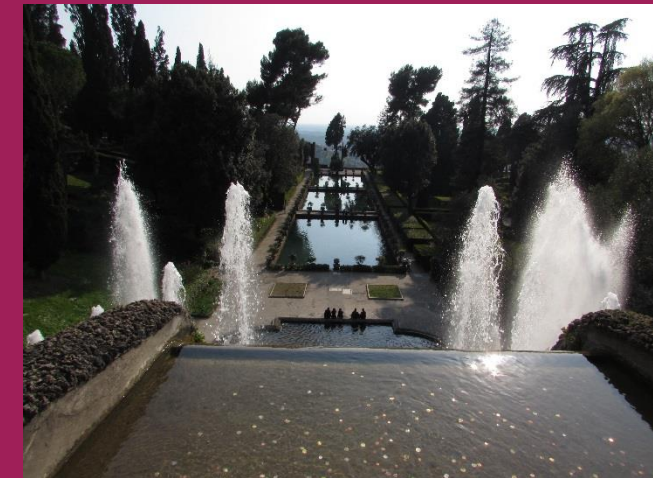


Historical Gardens

In the design of a garden, plants play a central role, the meaning of which has changed throughout history and between different cultures.

Plants are not only "green matter" to be adapted to human needs and the knowledge of ecological, phytogeographic and taxonomic specificities represents a fundamental element to be associated with different disciplinary aspects, which from this interaction would acquire a completeness of values.

In the recovery of this value, biology is fundamental but not unique, it must be developed in close synergy with some key figures, such as those of historians, architects and agronomists, both in the planning phase and then in that linked to their conservation





Conservation of Plant species in Historical garden

Buxus sempervirens

- Ars Topiaria in Roman garden
- borders and hedges of the Renaissance Italian garden

→ *Cydalima perspectalis* (Box borer) it is native to Asia and arrived in Europe for the first time accidentally, through infected boxwood plants

Domus Amorini Dorati, Pompeii



Begonia sp.
(origin USA)



Villa Celimontana, Rome



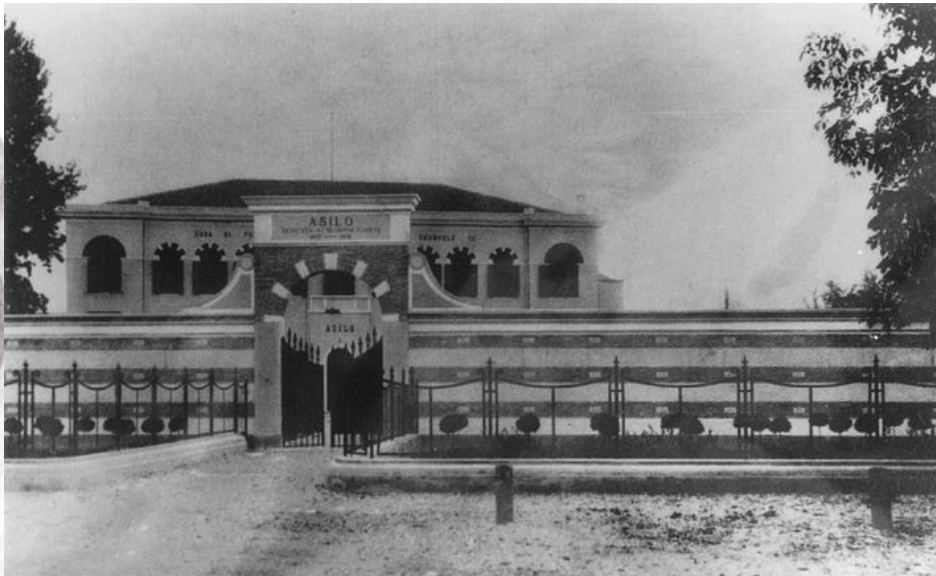
Laurus nobilis L.
Ars Topiaria



the Avenues and Parks of Remembrance

Parks and Avenues of Remembrance belong to the recognized heritage of "public monuments" (single article of law 559/1926) which provided that for every fallen victim of the Great War a tree had to be planted in all cities, towns and villages so that the young educated to remember and respect the fallen.

Of the estimated 2,000 parks nationwide, many have been destroyed, transformed and forgotten



the Remembrance Park of Noventa Padovana

The Trees planted are completely disappeared

THE ENHANCEMENT OF ARCHAEOLOGICAL PARKS AND HISTORICAL GARDENS

1. **DESIGN:** also with didactic intentions of historical environments, favoring biotic communities of significant interest and, at the same time, limiting damage to the structures through controlled management of the flora considered unsuitable or harmful to the historical elements of the area.
2. **COMMUNICATION:** of the historical-naturalistic and symbolic values of the plant and animal species present.
3. **ROUTES:** in which the object of interest is precisely the landscape context inside the archaeological park or garden.



Thanks for your attention!

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