

# Research and environmental education in Pavia's botanical garden

F. Sartori, D. Cabrini & F. Colombo Speroni

Dipartimento di Ecologia del Territorio e degli Ambienti Terrestri - Orto Botanico di Pavia,  
Università degli Studi di Pavia, Italy

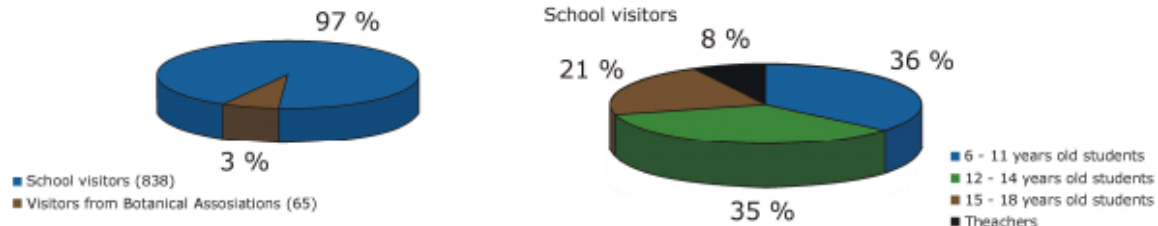
## Abstract

The Pavia's Botanical Garden, created in 1773 from the primer "Orto dei Semplici" (1558), is an active institution that contributes to biological conservation at local, regional and international scale. Under the scientific coordination of the "Ecologia del Territorio" Department (Pavia's University), are active different projects of "ex situ" and "in situ" conservation, including topics related to Botany, Micology, Ecology, Environmental Economy and Certification. Those actions contribute to conserve endangered plant species and to generate information applicable in environmental education programs. "Ex situ" activities include both: the cultivation and study of protected plants from Lombardy Region and other introduced species from Tropical, Arid and Mediterranean environments; and the "Lombardy Seed Bank" to study and conserve seeds of endangered species necessary for reintroduction and enrichment actions. "In situ" conservation role of the Pavia's Botanical Garden arises on the general management and scientific coordination of the research activities into the "Bosco Siro Negri" natural reserve. In this paper we present the results of different activities of environmental education conducted in field trips, didactic visits and laboratories, carried out in the last 5 years with high school and college students. We also present the new "Centro Didattico Divulgativo" (Center for Communication and Didactic activities) inside the structure of the Botanical Garden and discuss the role of the scientific information generated in the research project in the production of didactic material for this center.

## Historical overview



## Visits to the botanical garden (2005)



## Recent activities (L. Poggi e C. Delucchi)

### **Broad public activities**

- Open day at the Herbarium (October 2005)
- Spring fest and Autumn fest. Open garden and botanical activities (September 2005/March 2006)
- Exhibition of the Pelargonium plant collection (April 2006) and Rose plant collection (May 2006)
- “Solstizio d’Estate”. Sun observation through innovative instruments. Photo gallery. Conferences about the effect of the summer on the plants and the ecosystems. (June 2006)
- Seminar and conferences about the relationship between plants and humans

### **Didactic labs**

“AN OPEN DAY WITH THE RESEARCHERS.” Target group: Children of primary and secondary schools. Researchers of different laboratories of the DET have received, during an open day, several student of primary and secondary schools. The students have learned about the normal procedures used in for the scientific research and have participated actively in different simple experiments. The activities were conducted using the historical structures of the Botanical Garden, but also using innovative techniques and technologies for the research.

### **Didactic games**

“CACCIA AL TESORO”. Target group: Families with children under 10 years. Trough the solution of different enquires, each team discovers peculiar tree species inside the botanical garden. Each team develops a single route, but in the end, all teams coincide in the “Platano di Scopoli” and discuss about the botanical characteristics of the trees viewed during the game.

“GIOCO DELL’OCA”. Target group: Children of primary and secondary schools. Several students of primary and secondary schools have visited the Botanical garden and its structures related to research activities. Taking as reference the contents learned in those visits each group of students have designed an interactive table game including in each steps, different botanical and historical information.

## Research groups involved

Laboratory of

- Nature Conservation and Ecology of invertebrates
- Mycology
- Regional Seed Bank
- Lichenology
- Cartography
- Dendrochronology
- Botany and Herbarium

### **CDD – Bosco S. Negri**

In 2005 was created the new CENTRO DIDATTICO DIVULGATIVO “BOSCO SIRO NEGRI” (CDD Bosco Negri), inside the Pavia's Botanical Garden. This Center, financed by the Italian Minister of the Environment, is dedicated to the communication of the scientific results obtained by the research activities conducted in the “Bosco Siro Negri” natural reserve.

The CDD Bosco Negri is equipped with innovative technologies for didactic and communication that allows the discussion of ecological problems with different target groups. Users of this structure are students and teachers from primary and secondary schools, students from graduate and post-graduate courses of the Pavia's University. It's also used for scientific discussion in seminars, conferences and congress related to environmental management and conservation.

The continuous utility of this space will increase the knowledge of the environment of the Bosco Negri as a relict of the natural environment typical from the “Padana” plain, and will contribute to the sustainable management of the regional territory.

### **PDM – Biodiversity**

(In collaboration with G. Santamaria, C. Cordoni, C. Aibar, S. Tosi)

Modular Teaching units for Community Education

This project aims at teaching all members of the Community (general public, primary and secondary schools, teachers, etc) who want to comprehend the natural aspects of the territory that can directly or indirectly interact with their activities. It is structured around the idea of interacting networks of modular teaching units. Teaching of these units will be given either in classrooms or through long distance IT and multi-medial tools. The Ecology department possesses a series of facilities that can assist with this tasks such as: a Natural reserve "Bosco Siro Negri", a Continuing Education centre, the Germoplasm (Seed) bank, the laboratory of Floristic Cartography.

The underlying objective of the project is to create a continually improving interaction between Community interests and the results of scientific research. Obviously, the polycentric nature of the project requires extensive use of dedicated software and multi medial equipment that should be constantly updated according to the evolving Community needs. These interactive modules will be the base of exportable models to other teaching structures at different levels and locations.