



UNIVERSITÀ DEGLI STUDI DI MILANO
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FISICHE E NATURALI

Preserving and Promoting the Herbarium of the University of Milan through Digital Technologies

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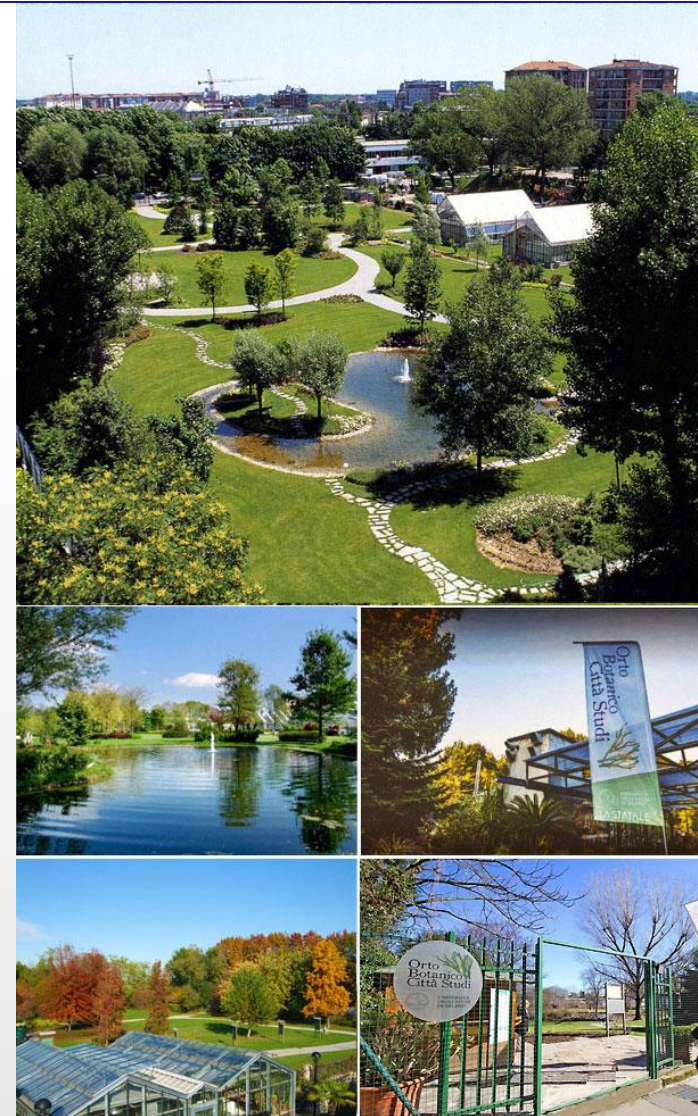
The Herbarium Universitatis Mediolanensis and its collections

The digitization project

Demo session

Conclusion

- The HbMI is based at the Department of Biosciences of the University of Milan. It constitutes the **non-living heritage** of the *Orto Botanico Città Studi*, the botanical garden of the department.
- The core of its historical collections dates back to the activity of the *Regia Scuola di Agricoltura*, the royal high school of agriculture founded in 1870 by the Ministry of Education.
- The HbMI mainly contains 3 kinds of cultural heritage: exsiccated plants, wall charts, and wood samples.



HbMI preserves collections of **exsiccated plant specimens** together with their **label documentary information**.

Historical herbaria (about **20000 exsiccata**):

- Francesco Ardissoni (≈ 2000 exsiccata, 1830-1857);
- Roberto Cobau (721 exsiccata, 1850-1870);
- Egidio Corti (≈ 2500 exsiccata, 1850-1870);
- Attilio Lenticchia (≈ 1000 exsiccata, 1880-1890);
- Angelo Mazza (≈ 1300 exsiccata, 1870-1895);
- Mathias Schreiber (6871 exsiccata, 1840-1910);
- Ferdinando Sordelli (≈ 5600 exsiccata, 1851-1911);
- other collections made up of a relatively low number (hundreds) of samples.



Collections and Materials: Wall Charts

- Didactic use in classroom lessons: large enough to be seen from a discrete distance, and highly detailed.
- At HbMI: cromolithographs realized between 1870 and 1920, depicting **animal and plant species**.
- Organized in **16 sets** that contain a total amount of **497 items**, including the whole Dodel-Port Atlas, a collection of 42 charts (1883)



- Documented collections of **thin sections of wood** of different plant species.
- Used to train students in recognizing the various botanical species on the basis of the anatomical characteristics of the stem and trunk sections.
- The most relevant collection is the one made by Hermann Nordlinger: about 1100 both European and exotic species collected between 1853 and 1888.



- Goal: **preserving** and **promoting** the cultural heritage of HbMI through digital technologies.
- Main activities:
 1. acquisition (digitization campaign);
 2. classification (database);
 3. web experience (dedicated web portal).
- Interdepartmental project funded by the Lombardy Region, involving 3 structures of the University of Milan:
 - the Department of Biosciences;
 - the Department of Computer Science;
 - the Research Center on Cultural Heritage.

- **Main problems:**
 - Exsiccata are not completely flat (hard to focus in all their parts) and are often fragile (a planar scanner would damage them);
 - Wall charts are big sized, fragile when not framed, and covered by a transparent frame when already restored.
- **Solution:** contactless scanning technique based on a professional digital camera remotely controlled, ad hoc polarising filters, diffuser sheets and controlled lightning conditions.
- 3 versions: RAW, high-quality high-resolution JPEG, and downsized JPEG..



- **Technologies**
 - Web pages: HTML5, CSS, JavaScript, PHP
 - DBMS: PostgreSQL
- **Sections of the portal:**
 - Exsiccata
 - Collections
 - Wall charts
 - Genera and species
- **Goals: high-quality digital objects, open access, integration**

DEMO SESSION

<https://erbario.unimi.it/>



- **Budget:** 25000 € approx.
- **Duration:** 6 months
- **Results:** 6000 records with high-quality digital objects attached, freely accessible via web.
- **Future work:** covering other historical funds and other categories of materials, such as xylotheque collections.

Thank you for your attention!

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