

## **SHERD PROJECT (Secure Heritage, Exhibition, Research and Didactics).**

### **Towards a DigiDactic Museum of the Aegean and Cypriote ceramic collection, University of Florence**

Luca BOMBARDIERI<sup>1</sup> | Anna Margherita JASINK<sup>2</sup>

<sup>1</sup>Dipartimento StudiUm, Università di Torino | <sup>2</sup>Dipartimento SAGAS, Università di Firenze

**Abstract:** Where Digitization meets Didactic: “*DigiDactic Museum*” creates a new border crossing, on which to build challenging exhibition platforms strongly oriented toward education and e-learning. New research trends and data capture procedures are currently spreading, with the aim of strengthening and updating potentialities and performances in museum collections exhibitions. Furthermore, advanced e-learning platforms are demonstrating as powerful tools with a clear appeal for students/visitors interested in these museums collections.

SHERD aims to develop a new DigiDactic Museum project specifically addressed to the audience of students in Archaeology and Ancient History at University level.

SHERD, presently under construction at the Aegean Laboratory of the SAGAS Department (University of Florence), is a complex new interactive museum exhibiting archaeological ceramic collections from Bronze Age Aegean and Cyprus. As a whole, SHERD extends use and potentialities of didactic tools already active within the MUSINT Project, focusing upon a semi-specialized audience of students.

While support materials will be made available (e.g. historical and archaeological overviews on specific topics, in-depth descriptive analyses of main aspects of the production technology), SHERD is conceived as an open filing system. Logged-in users will be able to contribute to the on-line collection catalogue, which will be a dynamically implemented system with free access.

As already tested in several parallel cases (e.g. Ancient Cypriote Collection at the British Museum, London), logged-in visitors can use images for purposes of education, teaching, academic study and research, publishing images in a book, article, thesis or booklet, provided that the publication is non-commercial, and has an educational, scholarly or academic nature.

**Keywords:** Bronze Age Aegean and Cyprus; Interactive archaeological gallery; Aegean Lab Florence.

## **Introduction**

### **Scientific and Educational activities of the AegeanLab at the University of Florence**

The AegeanLab (@egean.sns.it) at the University of Florence, first implemented as a scientific tool, since 2005 has developed numerous interactive and virtual didactic spaces in response to the interests of the research group and the increasing requirements of the educational community (from primary schools to Universities). The educational activity of the AegeanLab aims to develop a digital teaching platform for advanced e-learning purposes, using a crossed-linked approach that we recently dubbed DigiDactic. The

open on-line platform offers data bases (DBs) and virtual galleries intended to enlarge the learning abilities of pre-graduate students and young scholars, during their educational path, in Aegean and Cypriote History and Archaeology. Up to now, more than 50 students have been involved in the AegeanLab activities, regularly contributing to the on-going updating of data-entries as well as participating in the creation of new or extended versions of previous tools.

Two broad areas of interests concerning the Bronze Age in the Aegean and in Cyprus are currently covered by the activity of the AegeanLab: *Museum Collections and Corpora* and *Regional Histories*.

In addition, appropriate and dedicated tools have also been created for more general purposes, such as like a series of specific lessons edited by several young researchers, and downloadable fonts of Cretan Hieroglyphic and Linear B ideograms (BOMBARDIERI, JASINK 2014, forthcoming).

The core of the on-line DigiDactic collection in the AegeanLab is DBAS (Data Bases about Aegean Subjects), active since 2005, currently with three active DBs dedicated to specific research aspects of the wide areas mentioned above:

1. DBAS-CHS, created during 2006-2008 and continuously updated, is a typical relational DB dedicated to the study of the Cretan Hieroglyphic Corpus (based on CHIC and CMS); it offers a unique analytical approach to the significant relationships between decorative and script signs on seals and sealings of Middle Minoan period (JASINK 2008; id. 2009).
2. A new DB dedicated to Cretan glyptic, now available on DBAS, covers Aegean Cushion seals (DBAS-AC) (DIONISIO, JASINK, WEINGARTEN 2014).
3. The complete DB entries of the Aegean Collection of the National Archaeological Museum of Florence has been available since 2010 (DBAS-ACF), as an on-line supplement to the volume published by the Firenze University Press (JASINK, BOMBARDIERI 2009).

In addition, Regional Histories are represented to date by a geographic and onomastic DB dedicated to historical records related to the Ahhiyawa question (DBAS-AQ) (BOMBARDIERI, JASINK, MARINO 2009) and the Kouris River Valley Project (BOMBARDIERI, JASINK 2010).

The MUSINT Project represents a different DigiDactic approach implemented in the AegeanLab. While it offers a more dynamic and attractive educational tool, it also allows to funnel various aspects of the two key areas of interest mentioned above within a single interactive space. An interactive exhibition gallery is a virtual mirror of all the Museum collections of Aegean and Cypriote archaeological objects in Tuscany, often not exhibited in traditional Museums spaces. The project aims to picture the different regional histories of Cyprus, Mainland Greece, Minoan and Mycenaean Crete, Early Bronze Age Cyclades and Mycenaean Rhodes, as represented by their different artistic productions.

### **The SHERD Project**

The University of Florence owns a small collection of prehistoric ceramic sherds from Crete, Cyprus and mainland Greece. This collection has been used as an invaluable supplement to traditional classroom lessons on Aegean civilization. In order to further their use in teaching, it was decided to develop the SHERD project which initially documents this important archaeological patrimony of the Department. In the last few

years, students attending the training program have cleaned, photographed, drawn, and inventoried the majority of the sherd collection. As the program progresses, this will be upgraded into a full catalogue. The purpose of the SHERD project is going much beyond the first important result of re-evaluating an important archaeological patrimony of the Department as a unique training instrument. The aim is to organize SHERD as a virtual gallery, a part of the larger effort to safeguard and reap the fruits of our cultural archaeological heritage, which in these last years has seen also a growing interest in Italy (as also documented by the official government guidelines by Ministero Beni e Attività Culturali). The virtual gallery of SHERD will be organized to work at the same time as an archive, a library and a museum.

SHERD can be considered as an archive in that it will display the whole corpus of the objects, each with images and comprehensive descriptions. It will be a library in that a specific bibliography will be made available for each object, together with information on the historical-geographic context of the objects. Indeed, the objects of the collection encompass a wide horizon both geographically and chronologically and, consequently, a subdivision in various sections will be mandatory. This pertains to the library function of SHERD. Finally, SHERD will be a virtual museum since it will exhibit an enlarged virtual gallery where, along with the fragments, also images of significant wares of the same shape and of related historical and geographical provenance appear. Via SHERD it will be also possible to access MUSINT, where the visitor can find the whole corpus of Aegean and Cypriot antiquities in Tuscan Museums. The presentation of SHERD in the three sections may appear artificial and, indeed, the overlap between the sections – albeit somewhat artificial and indeed, overlapping – can be functional to meet the needs of the visitor.

SHERD represents an open source, conceived as a dynamic exhibition instrument, tuned for both scientific and educational e-learning purposes. A specific section will be dedicated to students and visitors who will be allowed to implement further proposals and extensions.

### **The SHERD Collection: provenance and chronology**

The digital SHERD archaeological catalogue includes more than 600 items of fragmentary ceramics and small utilitarian objects coming from surface collections collected from three Mediterranean macro-regions: Crete, Mainland Greece and Cyprus, as shown in fig. 1.

The entire collection will be finally catalogued and organized according to provenance/region, production and chronology.

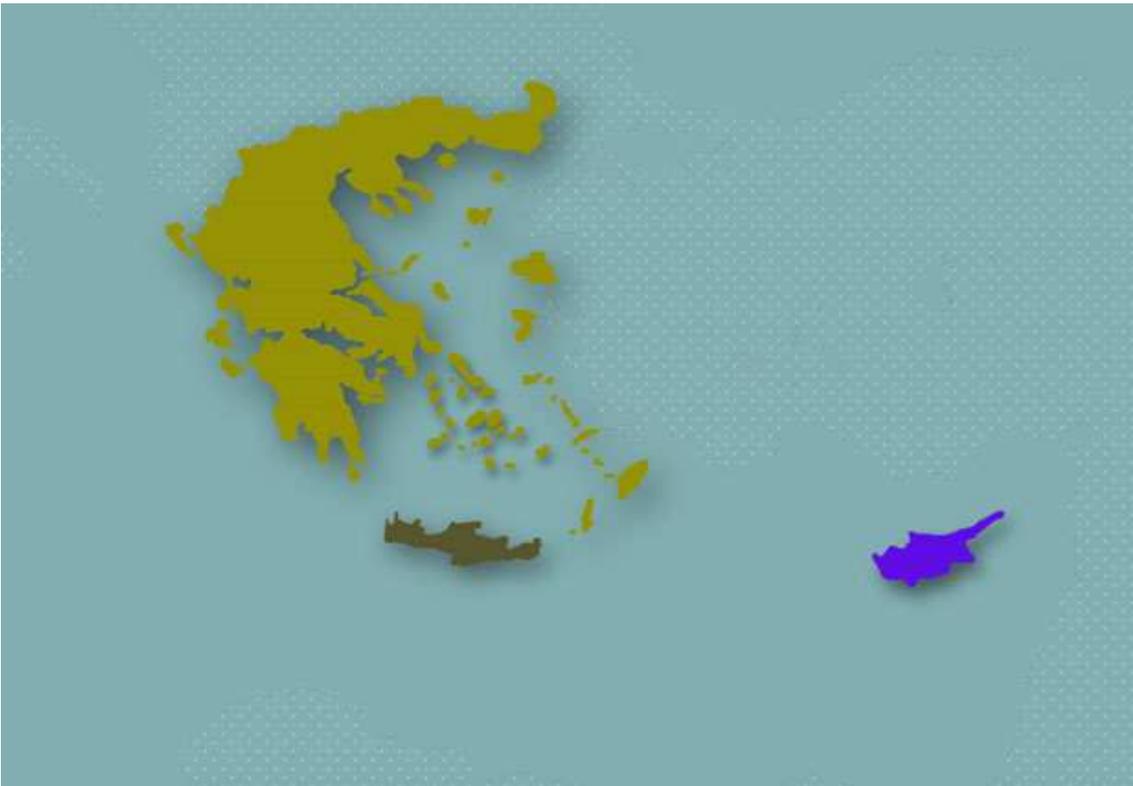


Fig. 1 – The three macro-regions: Greece, Crete and Cyprus.

As to the regional provenance, the majority of catalogued material comes from Crete (40%) and Greece Mainland (38%), while 22% of recorded ceramics and small objects are from Cyprus.

Most materials without a clear provenance are from Crete (only 25 entries out of 263 are certainly from Phaistos, while the remaining entries have no recorded provenance). Minoan plain and Kamares wares from Phaistos are mixed up with later materials, possibly dated to Hellenistic and Roman periods.

For materials from Greece and Cyprus information on provenance is definitely more complete since the majority of recorded entries is directly associated with a specific site, or archaeological area. Fifty-five sherds out of a total of 250 entries from Greece Mainland come from the area of Neolithic settlements of Sesklo and Dimini, in Thessaly; remaining materials are spread over a wide array of archaeological sites mainly in the Peloponnese (e.g. EBA settlement of Lerna; LBA Mycenaean centres of Tyrins, Gla, Pylos) (fig. 2).

As far as the chronological framework is concerned, it is worth noting that the higher percentage attestation is recorded for Cypriote assemblages: the chronology of recorded ceramic production ranges from Chalcolithic to MBA, with islandwide provenance (Ayios Nikolaos, Ayia Irini in the Morphou bay; Maroni on the South Coast). Post-BA materials are coming from the Amathus area (Limassol).

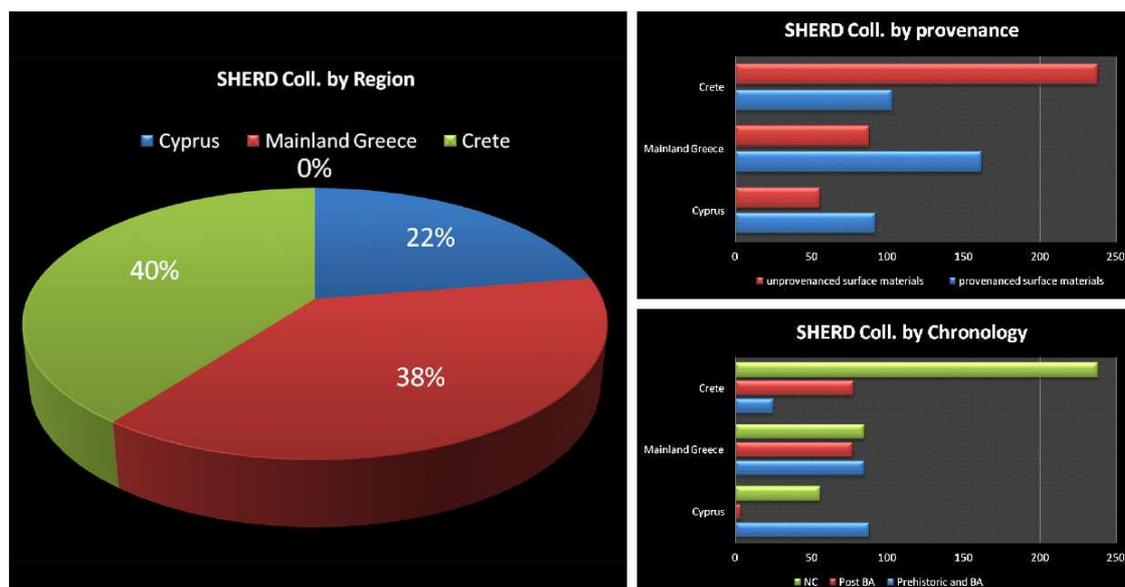


Fig. 2 – SHERD Collection: the ceramic assemblages

### Towards the SHERD digital catalogue

In the present section we illustrate the general structure of the SHERD digital catalogue. As an example, Figures 4 and 5 show the overall appearance of the 3D interactive viewer for two items of the collection. These were selected from two of the regions of SHERD interest, mainland Greece and Cyprus, and are representative of the earlier and most recent Pre- and Protohistoric materials in the collection. These are the Greece Mainland Prehistory (Sesklo and Dimini cultures) and the Late Bronze Age in Cyprus. From the specific page of any item one can access an historical overview of the period with general introduction to the main features of the period, including a photo-gallery with representative material productions (especially ceramics) of that time.

In addition, a traditional comprehensive text is available containing a full description for each entry of the catalogue, flanked by 2D drawings and photos as well as 3D models of diagnostic materials useful to place the item in the proper archaeological, historical and geographic context. Moreover, additional information about the conservation procedures are also available, as a supplementary learning tool. In specific cases, images and description of the on-going restoration steps are shown. (fig. 3)

Models of the ceramics have been acquired through scanner 3D NextEngine at the Dream's Lab - Scuola Normale Superiore, Pisa. After scanning, the objects were photographed under any possible angle to make a texture projection on scans. This process has allowed us to have a detailed final model. Finally, the 3D models obtained were integrated into a 3D interactive viewer.

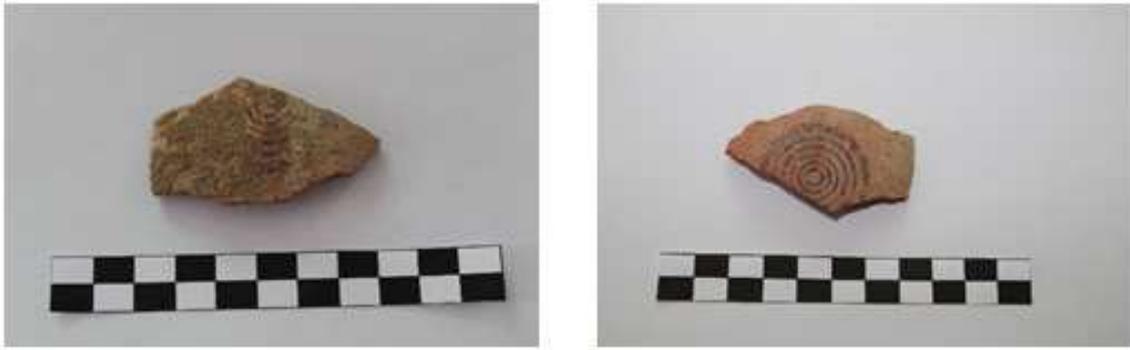


Fig. 3 – A Cypriot Iron Age sherd before and after the restoration

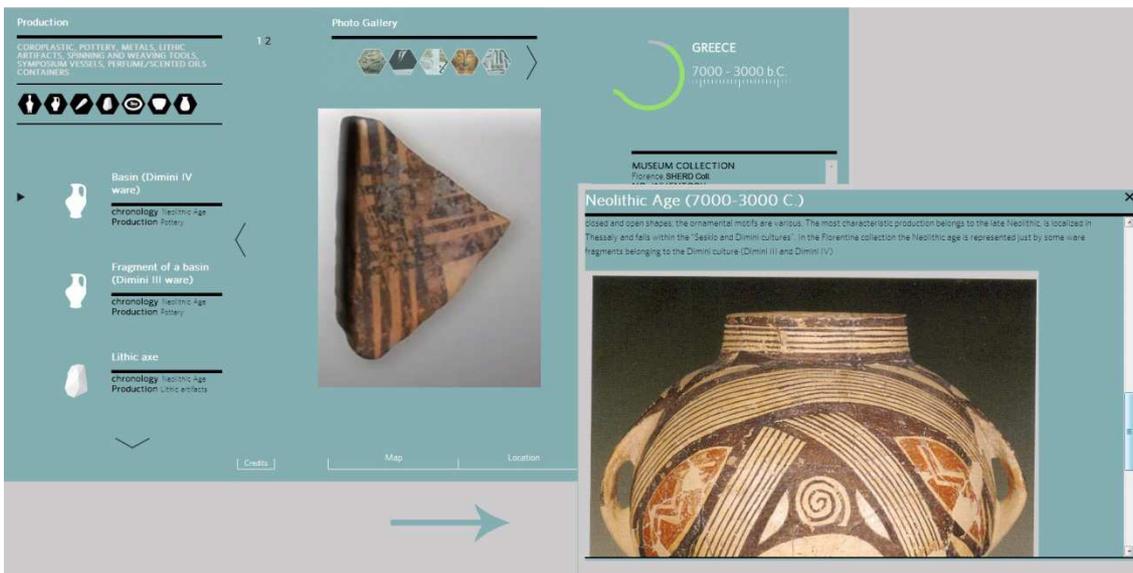


Fig. 4 – Neolithic sherd from Dimini (Thessaly).

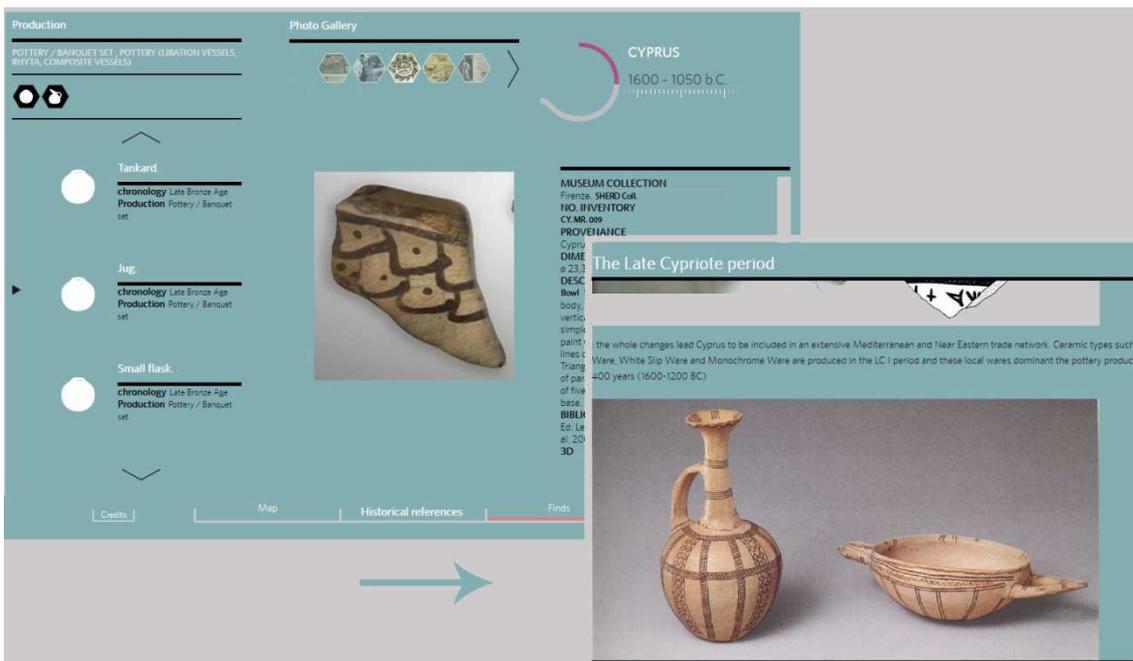


Fig. 5 – Late Bronze Age White-Slip sherd from Cyprus.

## Conclusions

We anticipate that SHERD will make a significant contribution to the educational aspects of the Aegean Laboratory of Florence. While the ceramic sherds are not sensational they play a significant role for scholars and students interested in ware analyses. Many typologies of Aegean and Cypriot ceramics are collected in SHERD, together with information on their geographic and chronological context. Impact will be increased by including images and descriptions of analogous complete objects. Presently SHERD is a work in progress, but the core of the project, i.e. the corpus of all the available fragments – inventory, drawing, photo, analysis of the single pieces, 3-dimensional resolution of some significant fragments- has already been completed.

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### Imprint:

Proceedings of the 18th International Conference on Cultural Heritage and New Technologies 2013 (CHNT 18, 2013)

Vienna 2014

<http://www.chnt.at/proceedings-chnt-18/>

ISBN 978-3-200-03676-5

Editor/Publisher: Museen der Stadt Wien – Stadtarchäologie

Editorial Team: Wolfgang Börner, Susanne Uhlirz

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