

# The Kyrenia Ship Conservation Project

## Kyrenia Ship Collection: Conservation Progress Report

August 2016



Photographs courtesy of Veronica Ford and Cassy Cutulle, 2016

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## **Contents**

- **General Introduction**
- **August 2016: Conservation Tasks in Progress**
  - **Preventive Conservation Tasks**
    - **Environmental Monitoring**
    - **Integrated Pest Management (IPM) at Kyrenia Ship Object Storeroom**
    - **Designing Storage**
    - **Supply ordering**
  - **Remedial Conservation Tasks**
    - **Reconstruction**
    - **Desalination**
    - **Restoration: Consultations and Testing**
- **September 2016: Projected Work Plan and Current Standing**
- **Budgets**
  - **June**
  - **July**
  - **August**

## **General Introduction**

In August, the conservators continued the reconstruction of previously desalinated ceramics using Paraloid B-44 40% w/v in acetone. Additionally, desalination of the last batches of objects was started and all of the smaller ceramics at the Conservation Laboratory in Nicosia are projected to be fully desalinated by the first week of September. After these final batches are desalinated, they will be reconstructed as described above.

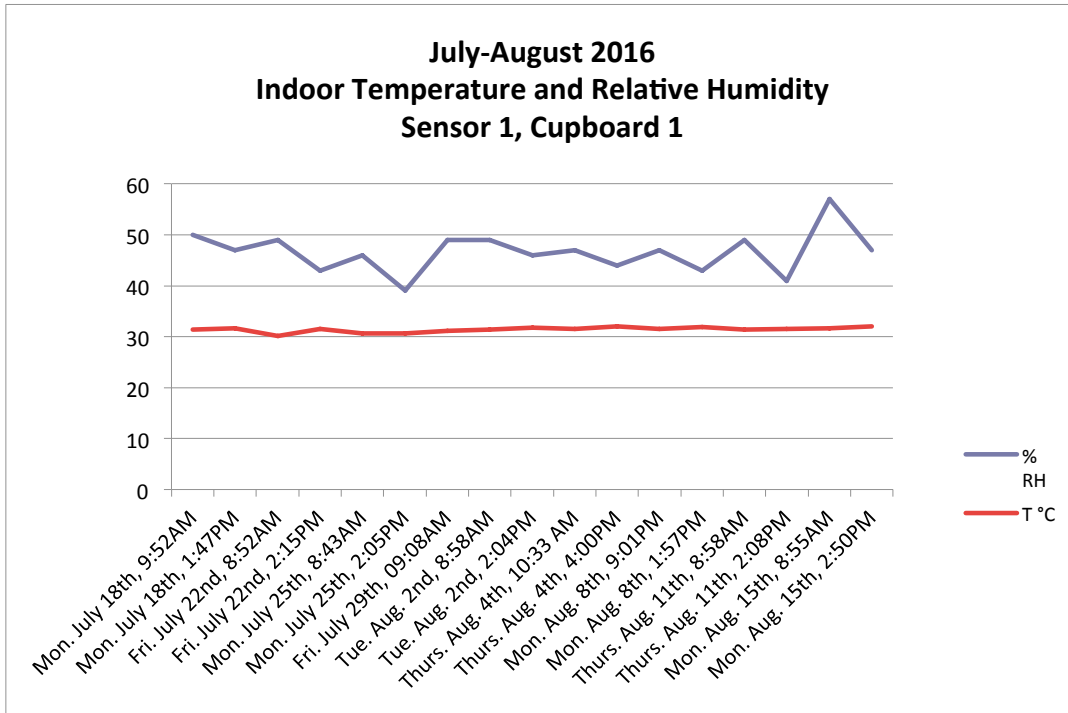
The conservators are also working to commence restoration on the ceramics objects which have been reconstructed. Through meetings with the Project Team, the UNDP and the Bi-communal Focal points, they have come up with a plan for the restoration. Throughout the last weeks of August, the conservators have been testing locally sourced filling materials for use in restoration. Restoration on the ceramics is projected to begin during the first week of September, if not before.

Lastly, the purchasing of supplies has continued to ensure that there are no future delays in object treatments or preventive activities. Currently, storage materials such as temperature and relative humidity data loggers, dental wax, plaster and dry pigments are being sourced and ordered. Furthermore, the conservators are also researching and consulting companies for the production of archival shelving for the un-placed wooden pieces of the Hull, stored in the Kyrenia Ship Object Storeroom.

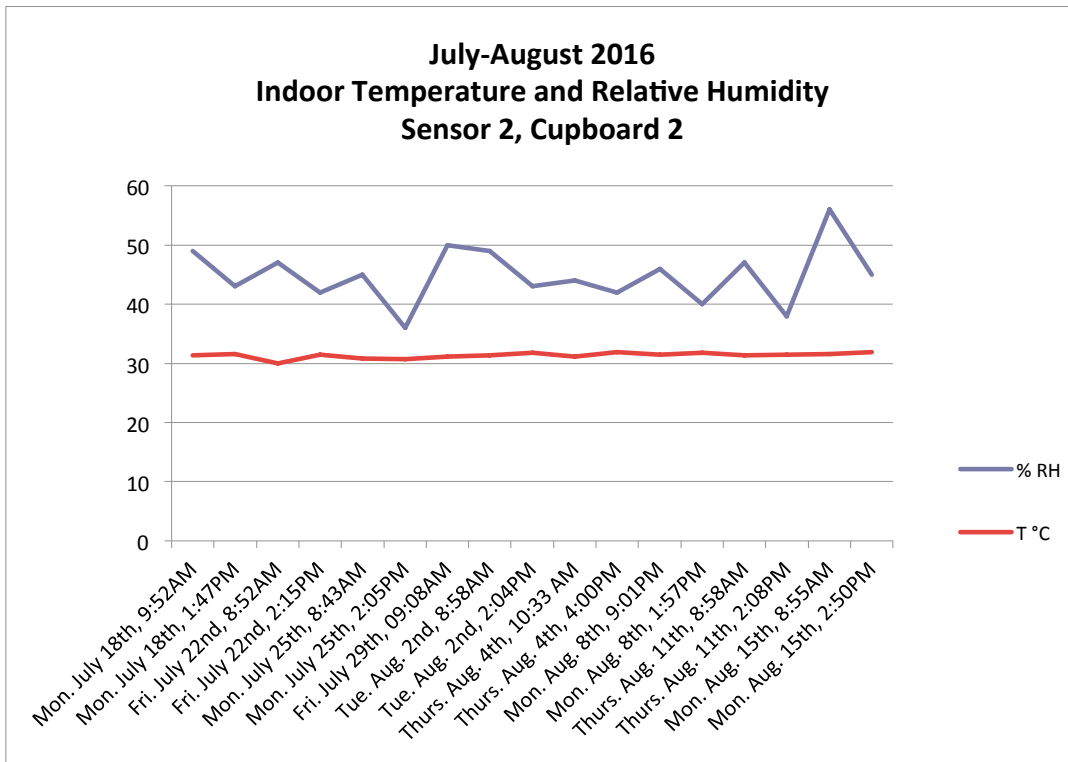
## **August 2016: Conservation Tasks in Progress**

### **Preventive Conservation Tasks**

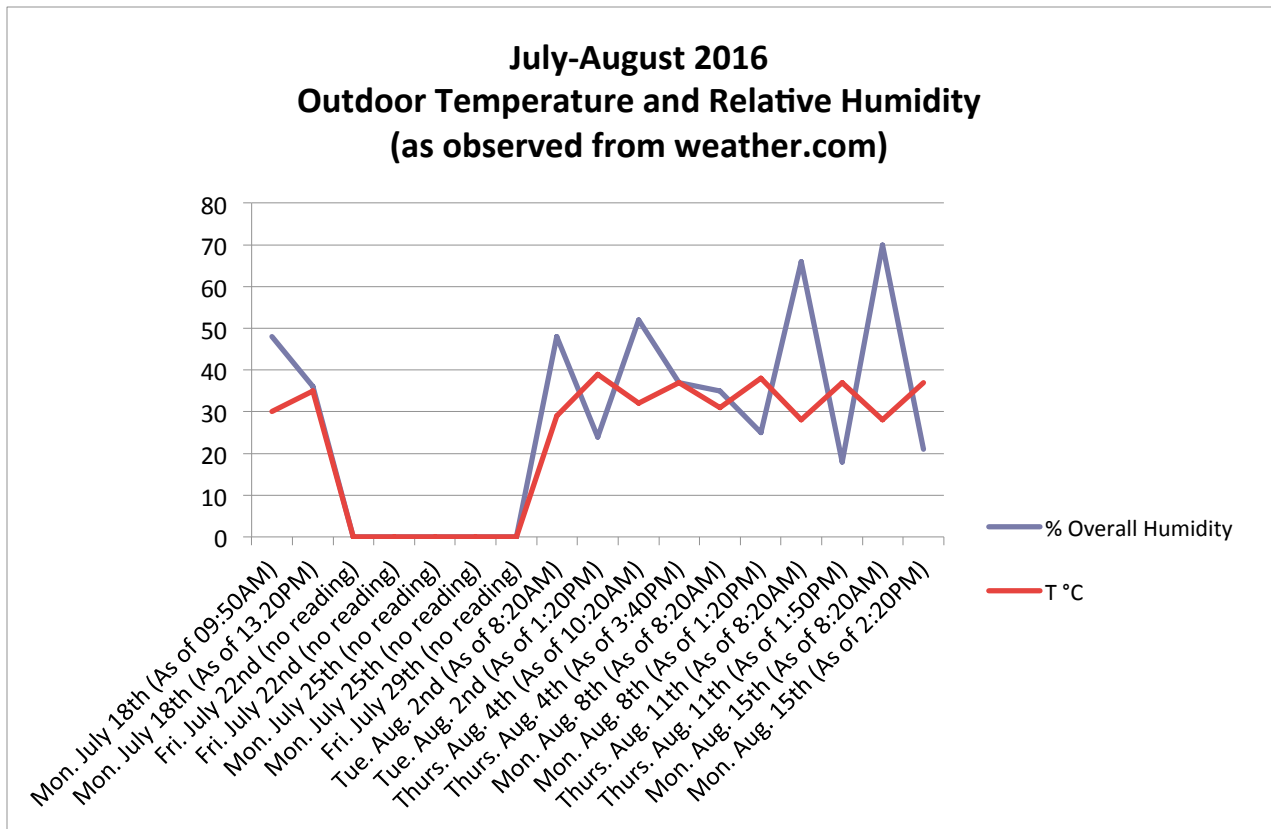
In July and August, the conservators continued to monitor and log the relative humidity and temperature at the Conservation Laboratory in Nicosia. Data from the monitors placed within the object cupboards were recorded, as well as data for the outdoor conditions, which was retrieved from “Weather.com”. The same recording schedule was utilized as previously: logging of relative humidity and temperature took place four times a week—two recordings on Monday and Friday mornings and afternoons at approximately 9:00am and 2:00pm. [See Figs. 1-3 Below].



**Fig. 1:** Graph showing the fluctuations in indoor relative humidity and temperature in Cupboard 1 (Graph courtesy of Veronica Ford, 2016).



**Fig. 2:** Graph showing the fluctuations in indoor relative humidity and temperature in Cupboard 2 (Graph courtesy of Veronica Ford, 2016).



**Fig. 3: Graph showing the fluctuations in outdoor relative humidity and temperature as observed from weather.com (Graph courtesy of Veronica Ford, 2016).**

During August, it is clear that the metal cupboards within the Conservation Laboratory have continued to provide a buffered environment [Figs. 1-2], when compared with the external outdoor conditions [Fig. 3]. In early August, silica gel was added to the plastic boxes used to house the metal objects in order to provide a lower relative humidity and greater protection from external conditions.

The “indoor” line graphs above [Figs. 1-2] demonstrate a comparatively stable temperature during the monitoring period of 31°C ±1°C. Relative humidity showed greater variation of 47% ±11%--at some periods the fluctuation was significant (for instance between August 11<sup>th</sup> and August 15<sup>th</sup>). However, the newly added silica gel should help to protect the more vulnerable metals from these fluctuations and prevent corrosion which may occur at a higher relative humidity.



**Figs. 4-5: Photographs of the silica gel used to control the relative humidity in the boxes storing metal objects.**

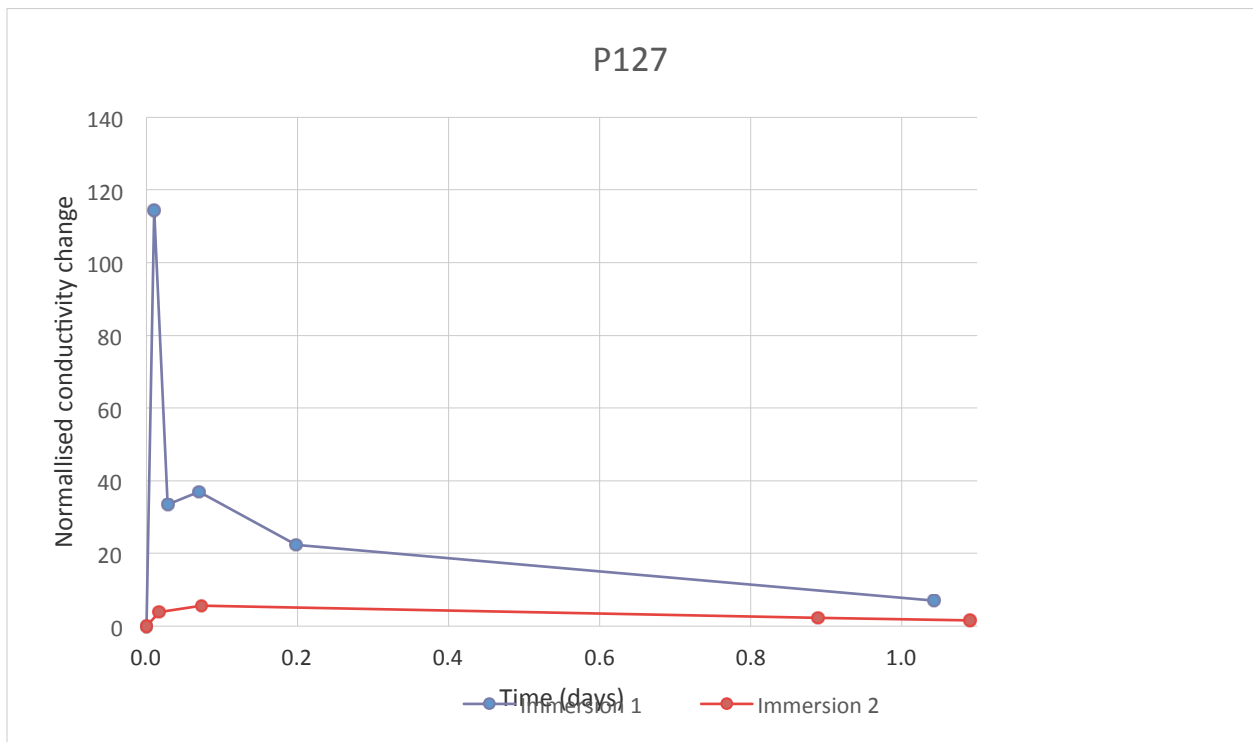
In mid-August the sticky blunder traps set by the conservators in April at the Object Storeroom in Kyrenia Castle were examined and the pests and insects logged. The traps contained a minimal amount of pests and insects and included one black beetle, two fruit flies, two silver fish, one small spider, one small lizard, one wood louse and approximately six ants and also dust and debris. In the case of the Object Storeroom, this information is particularly important, as pests are known to use organic materials as food and harborage. The remnants of the ship's hull and other items such as the almonds may therefore be particularly at risk from insect attack.

Also at Kyrenia Castle, the conservators—along with Owen Gander—have begun discussions with local metal cabinetry and shelving manufacturers, with the aim of designing custom metal shelving to house the Ship's hull fragments and lead sheathing, which are not on display. Upgrading the storage for these fragments is considered an important preventive task, allowing them to be handled and viewed more easily while reducing the risk of damage to them.

Supplies have also been purchased this month to allow progress with both preventive and remedial aspects of the Project. Plaster and pigments have been selected and purchased, along with extra plate wax to allow the restoration of the ceramics to proceed smoothly. Additionally, data loggers have been purchased, which will allow for the long term environmental monitoring of the Shipwreck Gallery at Kyrenia Castle.

## Remedial Conservation Tasks

While waiting for the D.I. 750 water deionizing replacement cartridge, Veronica and Cassy have worked to finish reconstruction of the previously desalinated objects. This work was finished during the third week of August. After the D.I. 750 unit arrived at the Conservation Laboratory, desalination was continued with batches #12 and #13. Currently, batch #12 (objects P18, P127, P130, P132, P140, P142, P152, P155, P158, P159, P160) and batch #13 (P133 in four boxes due to its larger size) are currently drying. Two additional ceramic objects for treatment (P113, P94) were transported from the Kyrenia Ship Object Storeroom on August 15<sup>th</sup>, and P113 and possibly P94 (pending testing) will constitute the final object(s) for desalination—batch #14—which should be finished by the first or second week of September.



**Fig. 6: Graph demonstrating the rate of desalination for P127 (Graph courtesy of Veronica Ford, 2016).**

The graph above [Fig. 6] illustrates the rate of salts removal from object P127 for the first two immersion baths. The blue line on the graph shows that the conductivity was initially relatively high when the object was placed in the first immersion bath. It later dropped drastically, raised slightly and leveled off. The red line signifying the second immersion, showed a much lower starting point, and a gradual decrease over time. This demonstrates that most salts are removed within the one-two hours of immersion. However, it is important to note that the first immersion bath does start with a higher conductivity due to the use of a half tap water/half deionized water solution. Subsequent immersions are always done with deionized water only, and will therefore start off with a lower conductivity.



**Figs. 7-9: Photographs of conservators Veronica Ford (top left) and Cassy Cutulle (top right) preparing and undertaking desalination of Batch #12 (Photographs courtesy of Cassy Cutulle and Veronica Ford, 2016).**

Additionally, in August the conservators met with the Bi-communal Focal points—Stella Pissaridou and Özge Sami—to discuss the restoration of the ceramics following their desalination and reconstruction. This meeting proceeded the meeting with the Project Team—Helena Wylde Swiny and Susan Katzev—alongside Andrea Berlin, who has worked extensively with the Kyrenia Ship ceramic collection. The meeting with the Project Team produced a prioritization for the restoration of the ceramics which describes the items which are likely to be displayed and the desired level of restoration for such items. This information was given to the Bi-communal Focal points who have agreed with the current plans to move forward.



After these meetings confirmed the conservators' plans, testing of materials for the restoration have started. The conservators aim to use locally sourced materials that are easily accessible. Thus far, three different types of plaster filling materials with various compositions have been tested for their working properties: "Rain Plaster", "Raysin 100", and "Polyfilla". Aside from testing the filling material for its physical properties, the conservators have also tested the use of both dry and acrylic pigments in no medium, in Paraloid B-44 5% and 40% w/v in acetone mediums and with a matte medium added to the filling material to produce a solid color throughout the fill. The results are confirming the use of "Raysin 100" which has been the easiest to work with in terms of filling the wax molds and the drying process. When mixed with dry pigments and no medium, the conservators noticed that it provided the most desirable results: a solid color throughout the entire fill with minimal to no air bubbles. Several other tests will take place as well as consultation with the Project Team and Bi-communal Focal Points before proceeding to restoration on the actual ceramics.



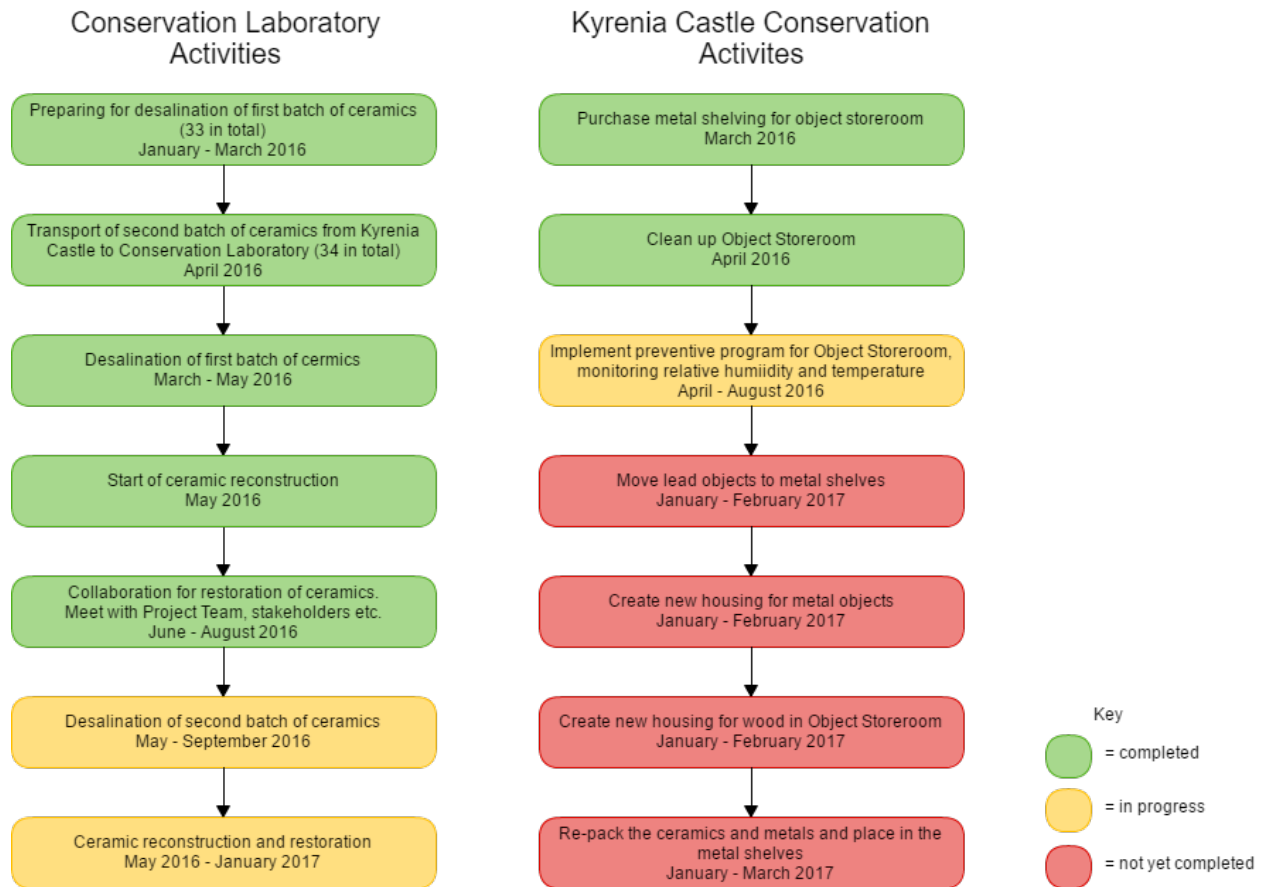
**Figs. 10-11: Photographs of test fills which are used to determine which filling material, medium and pigment combination are best for the restoration of the ceramics**  
(Photographs courtesy of Veronica Ford and Cassy Cutulle, 2016).



**Fig. 12: Photographs of the wax mold with fill in place, drying (left) and the results of the dried fill (right)**  
(Photographs courtesy of Veronica Ford, 2016).

## September 2016: Projected Work Plan

In September, the conservators will carry out the desalination of ceramic P113 and possibly P94 (pending testing) which were transported to the Conservation Laboratory in late August. Restoration of the ceramics will proceed, beginning with those which have been identified as “high priority” and are likely to be displayed. Preventive conservation activities and supply ordering will proceed as appropriate.



**Fig. 13: Flow chart displaying the activities to be undertaken by the conservators for this Project and the progress made thus far (Flow chart courtesy of Veronica Ford, 2016).**