

## **Amphora Sealing Practice and Socio-Economic Change in Late Antique and Medieval Egypt. Analysis of Stamped Vessel Sealings from the Monastery of Naqlun in the Fayum Oasis (6th–11th century CE)**

Amphora sealings, the ancient counterparts of bottle caps, are common finds on archaeological sites of Egypt. They were single-use covers, typically of mud or plaster, formed on the mouths of vessels to close them after filling. They often sealed large jars used for transporting goods like wine. Before drying, their soft surfaces were sometimes marked with stamps dipped in paint, leaving impressions that held meaning for the distributor and receiver. Fragile and unattractive, these artefacts have often been overlooked in research despite their potential to reveal much about ancient economies and societies.

The project aims to study amphora sealing practices in Egypt from the 6th to the 11th centuries CE, particularly in light of the socio-economic changes following the Arab conquest in 641 CE. It will focus on about 130 sealings from the Naqlun Monastery in the Fayum Oasis, excavated by the Polish Centre of Mediterranean Archaeology, University of Warsaw. These sealings, discarded at the place where the amphora contents were consumed, give us important information about how goods, especially wine, were distributed and where they were consumed. The stamps on these sealings also reflect wider cultural and economic changes. The research will seek to determine what information was conveyed by the stamped sealings, how sealing practices evolved, and whether they were influenced by contemporary trends and cultural changes.

The monastery of Naqlun was an important monastic centre during the Byzantine and Medieval periods. The archaeological finds from Naqlun, including over 1000 texts, provide a rich context for studying the amphora sealings and understanding their wider socio-economic implications. By studying the images and inscriptions on the stamped sealings, as well as the pottery found in the same contexts, the project will provide new data and perspectives on the consumption of goods at the monastery and their production and trade in Late Antique and Medieval Egypt.

By comparing the sealings from Naqlun with those from other sites, the research will identify regional and period-specific practices and place them in the broader context of similar finds from Byzantine and early Islamic Egypt. Importantly, while the Naqlun sealings from the 6th to 8th centuries are similar to those found elsewhere, no parallels have been found to the ones from the 9th to 11th centuries. Preliminary research shows that the earlier sealings mostly have inscriptions in Greek and Coptic, while the later ones carry images without texts. This allows for a comparison over time, which will help to understand the impact of the transition from Byzantine to Islamic rule and the resulting changes in literacy, language and visual culture. The project will also compare amphora sealings with lead and clay document seals to identify common trends and iconographic parallels.

The study views the stamps on amphora sealings as means of conveying information and symbols. By examining images and inscriptions on these seals, the project aims to gain insights on the social identities of the people who used them and interactions between Christian and Islamic cultural spheres. Especially the images — animals, saints, crosses, five-pointed stars, etc. — seem to reflect aesthetic and symbolic choices of the stamp owners. This approach, new for this type of objects, will provide insights into the shifts in the aesthetics and style of the stamps. The study will help understand interactions of the monastic community at Naqlun with the wider socio-cultural environment of Egypt.

Overall, the project will enhance our understanding of sealing practices and their cultural significance. The results will contribute to wider knowledge of socio-economic changes in Egypt during the transition from Byzantine to Islamic rule, and provide insights into the interactions between different cultural and religious groups and their aesthetic choices as reflected in their seals.

The results of the study, including a catalogue of the Naqlun sealings and answers to research questions centred on economy, information conveyed by the stamps, and evolution of amphora seal-stamping practices in relation to broader cultural changes will be published in a monograph. The documentation will be released as open data so that it can be easily found and reused in future research.