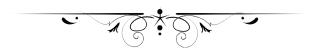
# MEETING POTAMON AND HIS TRAVELLING COMPANION ON THE LONG JOURNEY TO THE UNDERWORLD

An interdisciplinary study of two Roman mummies of Tomb 42 at Oxyrhynchus<sup>1</sup>



AGUSTH FARJAS. BIBIANA; BURGAYA MARTHNEZ. BERNAT; EGUILUZ MAESTRO. DELIA; MASCIA. LEAH; MUNAR GRIMALT. MARGALIDA; PULLIA. M. FRANCESCA.

## **Abstract**

This paper presents the results of an interdisciplinary study carried out over the last years in the High Necropolis of Oxyrhynchus by the joint team of restorers, philologists, and anthropologists of the archaeological mission of the University of Barcelona. In particular, the present contribution aims to provide an overview of the interdisciplinary research activities conducted by this team in the Roman Tomb 42. As discussed in the following pages, the studies carried out on two individuals — a child and a young woman — have offered essential information on the funerary practices performed in the city of Oxyrhynchus in the Roman period.

**Keywords:** Roman Oxyrhynchus, funerary archaeology, conservation, anthropology, epigraphic studies

## مُلخص البحث

لِقَاء « بُوتْ أُموِّن « ورفيقه فِي الرِّحْلة الطَّويلة إلى العالم اَلسفْلِي: دِراسة بَينِية مُتَعددَة التَّخصُّصات لَمومياءتين رُومانيَّتيْن مِن مَقْبَرة ٤٢ في أُوكسيرينخوس

يُقدِّم هذَا البحْث نَتائِج دِراسة بَينِية مُتَعددة التَّخصُّصات تَّت على مَدَار السَّنوات الأخيرة مِنْطَقة الجبانة العُليا بأوكسيرينخوس بواسِطة فريق عمل مُشتَرك بالْبعْثة الأثريَّة لِجامِعة برْشلونة يَضُم مُرمِّمِين، عُلَماء اَللغَة،

<sup>1</sup> With our deepest affection, we dedicate this contribution to Dr. Hassan Ibrahim Amer. For an in-depth study of the iconography of the burial equipment associated with the deceased discovered in the Roman Tomb 42, see the contribution in this volume by Dr. Esther Pons Mellado and Dr. Maite Mascort Roca

وانثروبولُوجيين. يَهدِف هذَا البحْث المساهمة بِشَكل خاصِّ بِتقْدِيم نَظرَة عَامَّة على هَذِه الأنْشطة البحثيَّة مُتَعددة التَّخصُّصات اَلتِي قام بِهَا فريق العمل في مَقْبَرة الرُّومانيَّة رَقْم اِثْنَان وأرْبعون. كمَا هُو مُوضَّح بِالْبَحْث، أَظهَرت الدِّراسات اَلتِي أُجرِيت على فرْديْنِ - إِحْداهمَا طِفْل والْأخر لِامْرَأَة شَابَّة - معْلومات أَساسِية حَوْل العادات الجنائزيَّة اَلتِي كَانَت مُتبَعَة بِمدينة أُوكسيرينخوس خِلَال العصْر الرُّومانيِّ.

الكلهات الدَّالَـة: أُوكسـيرينخوس؛ الرُّومانيَّـة عِلْـم الآثَـار الجنائـزيِّ؛ الصِّيانـة، الأنْثروبولوجْيَـا؛ دِراسـة النُّقـوش (ابيجرافيـا).

#### Introduction

An archaeological excavation requires the joint efforts of a team of specialists representing a variety of disciplines (i.e. archaeology, anthropology, restoration, architecture, papyrology, epigraphy, and ceramology). Especially in a settlement like Oxyrhynchus, which stands out for the heterogeneity of archaeological findings unearthed over the last years, a multidisciplinary research approach is essential for the success of the investigations.

This article aims to show the results of an interdisciplinary research devoted to the funerary depositions discovered in the course of the 2020 excavation campaign in the Greco-Roman Tomb 42 of the High Necropolis of Oxyrhynchus. Two individuals were found in association with burial equipment featuring complex decorative programs and different types of textual evidence. The joint work of a multidisciplinary team of the Mission of the University of Barcelona, which includes archaeologists, anthropologists, restorers, and philologists has resulted in a study that provides a deeper understanding of the funerary practices peculiar to this Egyptian settlement.

## **Anthropological Methodology**

The archaeo-anthropological documentation begins in the field, with the identification and delimitation of each funerary deposit recorded in detail. In front of a burial preserving funerary equipment made of cartonnage or other fragile materials, the anthropologist plays the role of assistance with the archaeology and restoration team. In the laboratory, during the work of the restorers and depending on the state of conservation, the anthropologists take care of the recovery of bone remains and associated material. The presence of fragile funerary paraphernalia in several burials of Oxyrhynchus affects the type of anthropological register used, allowing in most cases to be able to observe soft tissues, hair, in addition to skeletal remains. The two cases considered, the individual



child and the young adult have been studied in a detailed exhaustive manner by applying the usual anthropological, anthropometric and palaeopathological systems.

## Field Restoration And Work Methodology At Oxyrhynchus

After years of experience and work in the so-called High Necropolis of Oxyrhynchus, the restoration team has developed an emergency protocol for the findings of burials and, as in the present case, the treatment of fragile funerary equipment, like cartonnage masks and plaster mummy cases, which are often found in a poor state of conservation. Following the identification of this type of burial paraphernalia during the investigations on site, the archaeological and anthropological technicians working in the field inform the restoration team, which immediately prepares the tools and products essential for first-intervention treatments. From this moment on, the team collaborates with all the experts present on site, which often includes architects, epigraphists and papyrologists. This interdisciplinary approach is meant to avoid any possible loss of information regarding the context of the discovery and, when possible, assure the preservation of the material evidence found during the investigations.

The first step foresees the analysis of the general state of conservation of the artefact, followed by a more detailed analysis of the different sections of the mummy case.

The evaluation of the state of conservation and the solidity of the mummy cases is the most important factor in considering a possible transfer of the deceased to the warehouse or laboratory still enclosed in their original burial equipment, which remains a priority. On the other hand, a partial extraction can be an alternative solution, especially in the case of material evidence presenting a particularly poor state of conservation. In this case, the individual is separated from the original cartonnage or plaster cover.

After the extraction, cleaning, consolidation, and restoration of the fragments, which is essential to reconstruct the original appearance of the objects, they are transported to the laboratory. In the most difficult scenario, where the ensemble is extremely fragile, and the funerary equipment (like mummy cases) presents a poor state of conservation that does not allow its restoration, the preservation of all the extant fragments will, in any case, permit further studies on these archaeological remains.

The present contribution presents the results of the study carried out on the deceased 36181 and individual 36192. The two individuals were buried with funerary equipment (i.e. a mummy case made of plaster and a cartonnage mask) featuring decorative programmes inspired by the traditional Egyptian iconographic repertoire. In particular, the mask of the individual 36192 featured inlays of vitreous paste.



Individual 36181 presented a helmet-type mask made of cartonnage, which covered the deceased face and part of the torso. Similar funerary artefacts have been discovered over the last years of archaeological investigations carried out in other areas of the Oxyrhynchite necropolis.<sup>2</sup> This type of mask is made with layers of plaster over a textile, which is placed on top of the mummy's bandages.

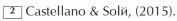
The individual 36192 was found enclosed in a plaster mummy case. These types of funerary artefacts are made of several layers of chalk. The first one, immediately above the mummy bandages, is a thick layer of coarse chalk with coarse-grained aggregates, which completely covers the individual. The second layer of chalk, made immediately above the thick one, is thin and without aggregates. It is on this second layer that the bas-relief decoration is made when the chalk is still fresh.<sup>3</sup> This second layer tends to be easily detached from the first and thicker layer. For this reason, much information on the appearance of the coffin's decoration is lost. In this regard, the collection of exhaustive graphic and photographic documentation in situ, before to the restoration process remains essential.

Once the state of conservation has been analysed and the methodology defined, the intervention of consolidation and extraction can be performed.

## The papyri

The two individuals were buried with papyrus packets placed on their abdominal and/or pelvic area. These ensembles of texts were found in association with clay seals featuring iconographic motifs peculiar to the Egyptian funerary tradition. The state of conservation of these papyri was extremely poor. They were in a state of significant dehydration, which made the material frail and powdery. These precarious conditions, likely dependent on the direct contact with ointments and oils used during mummification treatments, had significantly complicated their manipulation.

The papyri of these two individuals were found folded; the sheets were c. 6 x 4 centimetres in size. Since the beginning of the conservation treatment, it was possible to identify small sections of the original texts.



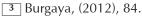






Fig.1. Papyrus consolidation process in the laboratory of the mission.

Oxyrhynchus Archaeological Mission.

The main objective was to identify the different papyrological units, clean them as much as possible, document the process and leave the manuscripts in the best possible condition for their storage, conservation, examination, and manipulation for study. The option selected for their storage consisted of placing them between sheets of glass, whose sides were sealed with adhesive tape afterwards.

The intervention protocol that we carry out in the laboratories of the Oxyrhynchus mission for these types of materials consists of superficial cleaning of the remains of dirt, bandages, sand, and salts. Followed by separation, unfolding, stretching, and flattening of the papyrus sheets using the punctual application of a mixture of water and alcohol (%50) or by steam. Each step is photographed in detail, and all fragments are enumerated.<sup>4</sup>

The papyri featuring writings on only one side were glued with cellulose glue (carboxymethylcellulose) first on Japanese paper and then on blotting paper to give them stability, thus allowing their manipulation.

However, the previously described method could not be applied to papyri preserving text on both the verso and recto sides, which required the selection of a more suitable method. These papyri were attached with tapes of Japanese paper, cellulosic glue was applied between them, and then the fragments were placed and fixed on glass using additional tapes of Japanese paper applied to the surface of the glass with the addition of a point of a cyanoacrylate adhesive. This technique allowed us to avoid any contact with the papyri.

4 Mascort Roca et al. (2021), 33.



## **Clay Seals**

The seals discovered in Tomb 42 are made with fine brownish clays. Seal impressions featuring motifs derived from the Egyptian funerary iconographic repertoire were made when the clay was fresh, leaving the drawings in a bas-relief. They are not fired afterwards.



Fig.2. Detail of one of the clay seals found on the individual 36181, before and after its treatment. Oxyrhynchus Archaeological Mission.

The conservation and restoration tasks have been minimal, consisting of dry cleaning and removal of all the adhered elements, such as bandages and remains of organic substances used in the course of the embalming procedure. Subsequently, fractured or detached fragments were re-joined with a nitrocellulose adhesive.

## **Documentation and Analysis of the Papyrological and Epigraphic Findings**

The study of inscribed objects in the field begins, when possible, with their examination in their original archaeological context. For this reason, especially the investigation of funerary depositions, where the discovery of textual findings is frequent, often involves the presence of specialists in charge of the study of papyrological and epigraphic findings. Immediately after the discovery, an in-depth analysis of the inscribed object is conducted. All the data that are considered essential, from the location of the artefact, its relationship with other findings, state of conservation and main characteristics, are recorded in a notebook. In addition, a comprehensive photographic documentation of the inscribed artefact in situ is acquired to integrate the information collected through the autoptic analysis. All stages following the discovery of inscribed materials, from their displacement from the original archaeological context to the transportation to the mission's laboratory until the performance of different conservation treatments, require the presence and collaboration with a specialist in charge



of the study of these findings. The work of the epigraphist and/or papyrologist in the field requires an in-depth analysis of these artefacts, which might last several days (and even months) following the conservation treatments performed. In addition, a constant revision of the acquired documentation remains essential for a clear interpretation of the findings, especially when they present a problematic state of conservation.

# The case of the child Potamon -individual 36192 Anthropological study

In the treatment of the corpse, ointments were used on the skin and hair, as indicated by the brown coloration and the arrangement of the hair in combs, as well as the dark shades on the bone tissue and especially on the joint surfaces.<sup>5</sup>



Fig.3. Skull of the child 36192, preserving the hair. Oxyrhynchus Archaeological Mission.

A simple textile wrapping covered the body while the outer mummy case acted as a sarcophagus or cover.

The anthropological study of the skeleton identified a sub-adult of 12-10 years, the age determined by the degree of dental eruption, the maturation of the skeletal elements, and the length of the metaphysis of the limbs. Morphologically, both the skull and the postcranial skeleton are very frail, being a child or young adolescent. The body height calculated from the metaphyseal length of the femur is 146 cm.<sup>6</sup>

<sup>5</sup> Agustн & Pullia, (2021).

<sup>6</sup> Cunningham et al. (2016); Adserias. (2019); White et al. (2012).



Fig. 4. Skeleton in anatomical position of the individual 36192. Oxyrhynchus Archaeological Mission.

At a pathological level, only the orbital roofs retain the imprint of a deficit period in terms of mineral contributions to the blood, with bilateral cribra orbitalia in an active phase. The hypoplasia on the enamel surface of lower lateral canines and incisors confirms the previous observation. In the dental state, no inflammatory or infectious lesions are observed, but only a malposition of the lower canines and the retention of a deciduous canine, the upper right (53).

## **Intervention of conservation**

The deceased was found enclosed in a plaster mummy case. The final thin layer featured a complex decorative programme. When it was excavated in the 2020 campaign, its state of preservation was very fragile; for this reason, a block extraction was carried out.

Fig. 5. Detail of the discovery of the individual 36192. Oxyrhynchus Archaeological Mission.



The procedure was the same as that performed in the previous case, even though, being a larger, thicker, and more complete mummy case, it required larger gauzes. Thanks to the initial consolidation tasks and the extraction protocol, the entire mummy case arrived at the laboratory, even though, due to its poor state of preservation, it suffered extensive fragmentation. The work in the laboratory was later continued in the following archaeological campaigns held in 2021 and 2022.



Fig. 6. Cleaning and consolidation process of the plaster mummy-case.

Oxyrhynchus Archaeological Mission.

In the case of individual 36192, during the conservation treatments performed in the laboratory, a papyrus package placed on the deceased abdomen was identified. The good state of conservation of this papyrus allowed an elaborate and efficacious restoration.

## **Examination of the epigraphic and papyrological findings**

The discovery of the deceased 36192 is of extraordinary importance for our understanding of the religious and social panorama of Oxyrhynchus in the early Roman period. The uniqueness of this finding resides in the identification of textual evidence that provides information regarding the deceased identity and the peculiar funerary procedure performed. An embossed inscription painted in red in the mummy case foot area was identified; the text preserves the name, patronymic (i.e. father's name), and age of death of the individual. This formal text had the function of an epitaph in memory of the deceased. Indeed, the formulary of this inscription finds parallels in other typologies of epigraphic testimonies; for instance, funerary stelae made of stone. The mummy case lower section, which corresponds to the deceased right leg, preserves another inscription. The text is painted in black and contains aside from the data already present in the first inscription, additional information on the deceased identity. The informal character of



this text, as well as the peculiarities of the ductus, suggest that it had a specific function in the performance of the last stages of the funerary procedures. Alongside a transcription of the Greek texts, detailed photographic documentation was acquired after the discovery. This step was essential to avoid any possible loss of information during the transportation of the mummy to the mission laboratory. The deceased, Potamon (Ποτάμων), bears a Greek name broadly diffused in Egypt in the Greco-Roman phase but probably originated in the area of Cyrenaica (today's Libya). His father, Sarapion (Σαραπίων), also bears an anthroponym of Greek linguistic origins; however, it is a theophoric name of Egyptian derivation associated with the cult of the Greco-Egyptian deity Serapis. In the complex socio-cultural context of Roman Egypt, it is impossible to ascertain the ethnic origin of Potamon and his father Sarapion since in this historical phase, many Egyptians bore Greek names.

During the conservation treatments carried out in the following months on the deceased remains, a papyrus located in the abdominal area of the mummy was identified. The manuscript was found carefully folded and presumably placed on Potamon's mummified body at the end of the embalming procedure. The finding of a clay seal during the restoration process suggests that the papyrus was originally associated with a clay device like other mummified individuals discovered in different tombs of the necropolis of Oxyrhynchus. We have parallels for this recent discovery thanks to the investigations carried out in 2021 and 2022 in other areas of the Greco-Roman necropolis. In addition, the report recording Bernard Grenfell and Arthur Hunt's excavation campaign carried out in the winter between 1896 and 1897 informs us about similar findings. While incomplete, we can identify the text written on our papyrus as a Greek documentary text. Nonetheless, further studies are deemed necessary to clarify the nature and content of this document.

# THE CASE OF WOMAN UE36181 Anthropological study

In the treatment of the corpse, it is inferred the use of ointments that have left traces of dark colour on the skeletal surface and have given a dark and opaque shade to the hair long and wavy, which remains attached to the skull.

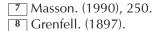






Fig.7. Skull of the young woman 36181, preserving the hair. Oxyrhynchus Archaeological Mission.

It preserves the tongue in the oral cavity, eye remnants, and periosteal, epithelial, dermal as well as the muscle ligament tissue, especially at the base of the skull, the facial part, and the spine.<sup>9</sup>



Fig.8. Base of the cranial block preserving the soft tissues, including the tongue.

Oxyrhynchus Archaeological Mission.

The textile wrap is made up of linen bandages that cover both the cranial and postcranial parts. On the facial side, part of the finer weft fabric is in contact with the skin, and the golden remains of the eye cap are preserved. A cord at the nape of the neck indicates that the shroud was not sewn but knotted at this level.

The skeleton corresponds to a young adult female, aged between 18 and 24, with a very graceful cranial and skeletal morphology and a body height of around 140 cm, calculated from the length of the femur.<sup>10</sup>

<sup>10</sup> Cunningham et al. (2016); Adserias (2019); White et al. (2012).



**<sup>9</sup>** Agustн, (2020).

A dental condition corresponds to a person in good health. Only the horizontal bands on the lower canines enamel are indicators of a period of nutritional deficit or long illness during the formation of these teeth in childhood. Equally, the cribra areas at the femoral neck confirm a deficient stage of the iron components of the blood.

## Intervention of conservation

The deceased 36181 was found in association with a richly decorated helmet-mask. The artefacts' features already suggested the gender of the individual, later confirmed by the anthropological study performed on the deceased remains. The state of conservation was extremely poor. The mask displayed many cracks, fissures and lacked constituent material, in addition the pictorial decoration was altered, powdery, and presented numerous losses.



Fig.9. Detail of the excavation and conservation treatments performed on the helmet-mask.

Oxyrhynchus Archaeological Mission.

Considering the fragile conditions of the mummy and burial equipment, it was decided to carry out an emergency partial extraction, which affected exclusively the cartonnage. For this purpose, all the detached fragments were collected and preserved separately. Then, the limits and profiles of the cartonnage were exposed and the surface was minimally cleaned. As the cleaning tasks were carried out, the surface was consolidated by spraying a solution of Paraloid B72- $\square$  with acetone with a progressive increase in the concentration of the resin. Finally, several layers of cotton gauze impregnated with Paraloid B72- $\square$  were applied to the entire surface.

Once the mask was removed from the set, it was transferred to the mission's warehouse where it was further consolidated, and the gauzes were removed from the mask surface. Finally, the fragments detached during the excavation process were re-assembled, while the surface was cleaned and consolidated.

The interventions performed on the two papyrus packages, which were found in association with the female individual (UE 36181), were limited due their poor state of conservation. The task primarily consisted in separating the papyrus layers allowing to identify and separate single papyrological units.



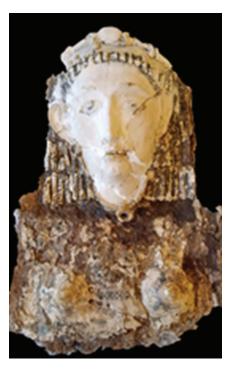


Fig. 10. Helmet-mask. Oxyrhynchus Archaeological Mission.

## **Examination of the papyrological findings**

The study of the deceased 36181 led to the discovery of two groups of papyrological remains found on the pelvic and abdominal area. Despite their fragmentary state of conservation, it was possible to recognise part of the envelopes containing the two groups of texts. According to the analysis made in situ, the packets seem to have been originally sealed by clay devices since they were found on the top of the papyrus ensembles. The area of deposition of these texts, their association with clay seals and their alleged intentional deposition on the deceased body seem to indicate that the individual 36181 was subjected to a funerary procedure known from other Oxyrhynchite funerary contexts, among which the burial of the young Potamon, discussed in the previous pages. However, this discovery differs from the case study examined before in this contribution. Indeed, the fragments identified include texts written in Greek corresponding to different genres (i.e. documentary, literary and paraliterary) and writing hands. Other fragments, seem to preserve text in the Egyptian language written in red ink.<sup>11</sup>

The finding of a heterogeneous ensemble of papyrus texts in a funerary deposition suggests, at first glance, their identification as cartonnage papyri. However, their discovery in papyrus folders, which were sealed by clay devices traditionally associated with the funerary administration, indicates that the deposition of these papyrus packets

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However, given the poor state of conservation of these fragments further analysis remains essential to verify this hypothesis.

was probably intentional. Perhaps the practice was meant to imitate a traditional Egyptian mortuary procedure, which foresaw the burial of the deceased accompanied by a funerary composition. Nonetheless, considering the uniqueness of this discovery, which finds no parallels to our knowledge in other Greco-Roman settlements investigated so far, this interpretation remains provisional. Only an in-depth study of the preserved documentation will allow a clearer interpretation of this discovery.

#### **Conclusion**

As discussed in the present contribution, the collaboration between specialists in different disciplines is essential for the interpretation of complex archaeological findings. The restoration treatments, the analyses conducted by the anthropological team, and the documentation of textual findings performed immediately after the discovery of these funerary depositions have permitted the acquisition of material evidence, which would have been otherwise irremediably lost. Specific typologies of materials, like the papyrological findings, required an immediate intervention aimed at minimising the impact of the atmospheric conditions and their removal from their original deposition. These conservation treatments carried out before and immediately after the displacement of the deceased from their original archaeological context were performed in extremis. A posteriori, once re-located in the laboratory, the burial equipment was subjected to additional treatments. These interventions have allowed us to subsequently perform an in-depth study of these findings. Among others, the examination of the written evidence has necessarily strictly followed the different stages of the cleaning and stabilisation works carried out in the laboratory.

Still, the importance of this discovery and the poor state of conservation of the findings will require further analyses over the following years. For instance, while the restoration treatments performed on the deceased found in association with the helmet-mask are in an advanced stage, the mummy case of Potamon will require further work to complete the entire restoration process. Likewise, the study of the epigraphic and papyrological documentation will demand further analysis to reach a clear understanding of the nature of these discoveries.

In this sense, the present contribution aimed to discuss only a preliminary stage of a multidisciplinary research project originated from the collaboration of the team of conservators, anthropologist, and philologists of this archaeological mission. Hopefully this joint research will provide in the following years a rich set of evidence essential for our understanding of the funerary panorama of Roman Oxyrhynchus.



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