

## AMS DATING OF AN ARTIFACT FROM BANAT MUSEUM'S EGYPTIAN COLLECTION AND REMARKS REGARDING THE PRESERVATION STATUS

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(Summary)

Quite a large number of Egyptian antiquities acquired at the end of the 19<sup>th</sup> century and the beginning of the 20<sup>th</sup> century were proven as being forgeries. One of the best method to identify this kind of fraud, for the items manufactured from organic mass, is the <sup>14</sup>C dating. A fragment of a coffin from the Banat Museum's collections, assigned on stylistically analysis to the 21<sup>st</sup> Dynasty, was dated via AMS and thus its chronological position was confirmed and, consequently its authenticity was clearly established. The relative poor status of preservation of the item in question as well as of other four fragments from the same coffin is demanding the initiation of the restoration work.

### *Introduction*

The large number of forged Egyptian antiquities<sup>1</sup> creates doubts regarding the authenticity of this kind of artifacts bought and registered in various museums in the end of the 19<sup>th</sup> and the beginning of the 20<sup>th</sup> centuries.

A very good method in spotting the possible forgery of this kind of objects manufactured from organic mass (wood, bone, ivory etc.) is to date the raw material using the radiocarbon method<sup>2</sup>.

The Banat Museum from Timișoara collections comprise a batch of antique Egyptian artifacts, registered into the museum's collections at the end of the XIX<sup>th</sup> century – the beginning of the XX<sup>th</sup> century.

This paper will be focused on the AMS dating of the support base of one artifact from this batch

and on the preservation status of it. The AMS dating had the purpose of attesting the authenticity of this item.

### *Short description of the Egyptian antiquities group of items from Banat Museum*

This exotic group of antiquities from the Banat Museum collections comprises today 52 objects considered as being of ancient Egypt provenance<sup>3</sup>.

The beginning of it is considered to be 1879, when the priest Emil Folly of Follimonov donated two Egyptian objects<sup>4</sup>. The formation of this collection is going on, based especially on donations (e.g. from doctor Horváth Imre in 1886<sup>5</sup>, Ormós Zsigmond in 1889<sup>6</sup>, Berkeszi István in 1892<sup>7</sup>, Meskó Béla in 1901<sup>8</sup>). Some items were acquired by the museum: a marble statuette found in Danube in 1897<sup>9</sup> and one Egyptian object from the private collection of Pongrácz Imre in 1903<sup>10</sup>.

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<sup>1</sup> See for example Wakeling 1912; Jones *et al* (eds.) 1990, 161–165; Lucarelli, Müller-Roth 2014; Voss 2014.

<sup>2</sup> In his efforts of testing the availability of the radiocarbon dating, Willard Libby used Egyptian antiquities as known markers – see Libby 1960, 600–602. Radiocarbon method is considered one of the ways for scientific detection of fakes and forgeries – see Craddock, Bowman (eds.) 1990, 284, 286. See also Bronk Ramsey *et al* 2010, for very good and convincing results regarding the Dynastic Egypt chronology, based on radiocarbon method.

<sup>3</sup> Anđelković, Demian 2016, 9.

<sup>4</sup> Anđelković, Demian 2016, 113.

<sup>5</sup> Anđelković, Demian 2016, 114.

<sup>6</sup> Anđelković, Demian 2016, 114.

<sup>7</sup> Anđelković, Demian 2016, 114.

<sup>8</sup> Anđelković, Demian 2016, 115.

<sup>9</sup> Anđelković, Demian 2016, 115.

<sup>10</sup> Anđelković, Demian 2016, 115.

In 1906 two donations enriched considerably the Egyptian collection of the Banat Museum. The first one, done by Bleyer Iszó is dated in august 1906<sup>11</sup>. The second one, the richest, comprising 31 items<sup>12</sup> belongs to Max Herz Bey, director of the Arab Museum in Cairo<sup>13</sup>. In 1908 Max Herz donates another batch of seven small Egyptian antiquities<sup>14</sup>.

The targeted item of the present paper is part of the first donation of Max Herz<sup>15</sup>.

*Brief presentation of the item  
with inv. no. 1142*

The object registered with the inv. no. 1142 is one of the side-walls of a coffin<sup>16</sup> and was published having the sizes of L=100 cm, H=32,5 cm, T=3,62 cm<sup>17</sup>. A re-examination of this aspect was done by us and the results are presented in Image 1. The thickness of the upper plank is 3,3 cm to the left and 4 cm to the right.

Three mythological scenes are depicted on this artifact (see Photo 1)<sup>18</sup>. It was attributed, based on the stylistically analysis, to the 21<sup>st</sup> Dynasty of Ancient Egypt<sup>19</sup> like all the other fragments of coffin from the Banat Museum collections<sup>20</sup> (inv. no. 1143–1146 – see Image 2). All these five items (inv. no. 1142–1146) are considered to be parts of one coffin<sup>21</sup>. Another fragment, part of the collec-

tions of the Fine Arts Museum from Budapest (inv. no. 51.325), is considered part of the same coffin<sup>22</sup>. E. Liptay attributes this item to the early or middle 21<sup>st</sup> Dynasty<sup>23</sup>, confirming partially the dating proposed for the items no. 1142–1146 from Banat Museum.

Historically, the 21<sup>st</sup> Dynasty marks the beginning of the Third Intermediate Period and is framed chronologically between 1069–945 BC<sup>24</sup> and comprises seven pharaohs: Smendes I (1069–1043), Amenemnesu (1043–1039), Psusennes I (1039–991), Amenemope (993–984), Osorkon the Elder (984–978), Siamon (978–959), Psusennes al II-lea (959–945)<sup>25</sup>.

*Manufacturing techniques of the item with  
inv. no. 1142 and its preservation status*

*Manufacturing techniques*

The wooden panel is built up of four planks of easily irregular form, planed coarsely (the lower plank still preserve the bark of the tree). The largest three planks are assembled by wooden dowels/nails (Photos 2a and 2b)<sup>26</sup>, and the fourth one, the smallest is assembled by a simple jointing of the angular shaped edges, attached using animal glue (Photos 3a and 3b). The resulted gaps and the empty spaces between the planks were filled up and strengthened with clothes soaked in animal glue (Photos 4a and 4b) and most probably calcite.

The next step was to apply the gesso, both on the outer and inner surfaces (Photo 5), thus creating a flat surface, optimal for the painting layer. The preparation layer, a white ground, with chalky facet was applied unequally on the wooden dough, depending on the irregular facet of the planks (Photo 6). It is stated that for the ground layer or gesso of the painted Egyptian wooden coffins, the calcite was the main component, sometimes mixed with gypsum, huntite or quartz<sup>27</sup>.

Cihó 1988, 25, cat. no. 93 we can underline that the object labeled by Andelković, Teeter 2015 as section B, is composed from three broken pieces (in fact the edges of three planks) and is labeled as inv. no. 1143–1144 (also inv. no. 1145 corresponds to section D and inv. no. 1146 corresponds to section A).

<sup>22</sup> See Andelković, Teeter 2015 and also Liptay 2011, pl. 18, inv. no. 51.325.

<sup>23</sup> Liptay 2011, 65.

<sup>24</sup> Cihó 1988a, 36, Shaw 2000, 485.

<sup>25</sup> Cihó 2008, 455–456; see the same opinion to Shaw 2000, 485–486.

<sup>26</sup> See in this respect, also, Andelković, Demian 2016, 84.

<sup>27</sup> Mahmood, AbdEl Fatah 2011, 663; Bonizzoni *et al* 2011, 1217; Bracci *et al* 2015, 515; Abdelaal *et al* 2014,

<sup>11</sup> Andelković, Demian 2016, 116.

<sup>12</sup> Andelković, Demian 2016, 119. See also n. 116 from the same source.

<sup>13</sup> Andelković, Demian 2016, 117.

<sup>14</sup> Andelković, Demian 2016, 120.

<sup>15</sup> See Andelković, Demian 2016, 119 and fig. 60d-e, positions 2 and 3 from the list written by Max Herz.

<sup>16</sup> The left one, middle section of the basin, according to Andelković, Teeter 2015, 212. The authors labeled this object as section C.

<sup>17</sup> Andelković, Teeter 2015, 212.

<sup>18</sup> For a very detailed description of the item and of the painted vignettes see Andelković, Teeter 2015, 213–215. See also the proposed numbers for the vignettes (from the left to the right) from the same source, numbers used by us below.

<sup>19</sup> Cihó 1988, 24, nr. cat. 91; Andelković, Teeter 2015; Andelković, Demian 2016, 92.

<sup>20</sup> Cihó 1988, 24, nr. cat. 91.

<sup>21</sup> Cihó 1988, 24, nr. cat. 89–93. The author considered these objects as being fragments of a sarcophagus and not coffin. What is to be mentioned here is that cat. no. 90 from the quoted source, is in fact the object with the inv. no. 1141 which is, according to the inventory register, a funerary masque, with no relation with the coffin, attributed to the 26<sup>st</sup> Dynasty and found in Giseh (see Andelković, Demian 2016, 96 and Image 2 from the present paper). Andelković, Teeter 2015 mentioned from the title that they are dealing with five inventory numbers (1142–1146, i.e. 1142, 1143, 1144, 1145, 1146), but they are discussing about four items, nominated as sections A – D. Using the information from



The painting technique, macroscopically evaluated, is *tempera* (pigment and binder) and is lacking the varnish. In Ancient Egypt for tempera technique the most common binders are animal glue or plant gums<sup>28</sup>. For the 21<sup>st</sup> Dynasty, it is mentioned the presence of tragacanth gum as binder<sup>29</sup>.

The item no.1142 preserves only one original edge, more precisely the upper one, which corresponds to the fastening zone between the lid and the main box of the coffin. This assertion is supported by the presence here of two rectangular apertures (Photo 7). The lower edge is the result of the breakage of this side wall of the coffin from the floor panel, affirmation sustained by the irregular shape of this edge, the obvious rupture traces of the lower plank and of the wooden dowels (Photo 8).

The left and right sides of this item are the result of a modern intervention, i. e. sawing the coffin in several pieces<sup>30</sup>.

#### *Preservation status and alterations*

The painting layer is missing not in a very high proportion (Image 3), several causes of degradations being indentified and they will be presented below accordingly.

1. Manufacturing and aging types of degradations: the defective manufacture of the planks' surface provoked the degradation of the painted layer. The irregularity of the median plank' surface caused, in the area of vignette no. 3, the thinning of the ground layer at the preparation time and consequently, the painted layer was applied almost on the wooden board. This fact led to the effacement, during time, of the painted images from this respective segment (Image 4, Photo 9).

The dehydration and consequently the drying of the wood and of the animal glue have as result the mobility of the large composing planks of the panel and to the detaching of the fourth one (Photos 3a, 3b). All these led to the cracking of the gesso and implicitly of the painting layer, causing detachments of it.

Deep gaps, until the level of the wooden panel, are visible especially on the jointing areas of the planks (Images 5, 6). Thin cracks and a network of superficial craquelures are noticeable on the surface of the painting layer, caused mainly by the aging process (Photo 10).

The ground layer suffered, due to the dehydration (causing also aging phenomenon) visible cracks. These fissures are leading to the detachment of the ground layer and implicitly of the painting layer, from the wooden panel (Image 7).

2. Mechanical types of degradations: another cause for the ground layer's detachment is of mechanical nature, as a result of the lower edge breakage (Image 7, Photo 11). The same phenomenon, observed on the upper edge of the panel is caused by inappropriate handling of this item, during time (Image 7, Photo 12).

The painting layer suffered also degradations due to the mechanical shocks and inappropriate handling.

The wooden panel shows typical alterations caused by the aging of the wood, as well as marks of impact, scratching and splintering due also by inappropriate handling.

When the Egyptian artifacts of the Banat Museum were brought back from Cluj in 2008<sup>31</sup>, the object with the inventory no. 1142 have assembled on the back a rectangular piece of plywood (Photo 13). This was used most probably as a mount for a vertical display. After the removal of this plaque the traces of the wood screws remained visible (Photos 5, 14).

3. Biological and inappropriate depositing types of degradations: the wood shows visible traces of xylophagous insects' (*Anobium punctatum*) infections, presenting areas where the wood looks spongy (Photo 15a). The infection is presently inactive, but the flying apertures are visible also on the painting surface (Photo 15b).

On the upper edge and on the area of the vignette no. 1 from the painting layer patches caused by pluvial water leakage can be notice (Photos 16a and 16b).

Deposits of dust and grime on the gesso are visible on the upper edge of the item. Actually, on the entire surface of the panel are visible this kind of clogged grime and dust deposits.

#### *Primary preservation actions*

The object was dust off by dry and gentle brushing. Due to the specificity of the manufacturing techniques and materials this item is deposited on a flat surface, horizontally and wrapped in PH neutral paper. The assurance of a controlled microclimate was attempted, especially because the deposits of the Banat Museum are situated into

180–181; Bader, Al-Gharib 2014, 401; Abdrabou *et al* 2015, 579; Scott 2014, 6.

<sup>28</sup> Mazurek *et al.* 2014, 77.

<sup>29</sup> Scott 2014, 3.

<sup>30</sup> For the same opinion see Anđelković, Demian 2016, 84.

<sup>31</sup> For the "journey" of this collection towards Cluj and back to Timișoara, see Anđelković, Demian 2016, 124.

a historical building, environment which generates strong influences on this matter.

The annual graphs done by monitoring the temperatures and relative humidity, using thermohygrometers, into the deposit of the Egyptian collection, offer us an image of quite large variations of these two elements (T/RH), especially of RH (see Graphs 1–4). These alternations are triggered by the outdoor climate especially during summer time and also by the heating system of the building, especially during January till March. The highest peak for RH is reached generally during May (with an exception in 2014) when the outdoor temperature is not too high and the heating system of the building is off.

#### *The sampling procedure*

The sampled coffin fragment (inv. no. 1142 – see Image 2) is built from three long wood planks (see Photo 1). The plank from the middle is wider and presents on the left part a completion made from the fourth plank which is assembled to the larger one as an oblique cut from upper left edge towards right, having as result, after cutting it in parts in modern times<sup>32</sup>, an independent, small rectangular trapezium (see Photos 1, 3b, 17, 21, 22), presently detachable.

Thus, the lower plank presents on the left upper edge an area where all the inner structure of the trunk is visible, easily accessible and very well preserved (see Photos 17, 18). This zone (see especially Photo 21) is also suitable for sampling because, in case of the needed restoration of the painted parts of the coffin fragments, will be completely covered and, due to the size and position of the sample, does not affect in any way the structural resistance of the object.

The sampling procedure was based on the asserted inner structure of the dicotyledonous plants, especially trees, with concentric layers of cell, each one being deposited generally in 12 months cycles<sup>33</sup>. The outermost ring of a tree trunk represents the time of the death (in this case most probably the cutting down moment) for the tree.

The sampled plank of the sarcophagus offer another advantage: on the both sides of the plank the bark of the tree is still preserved. So, the sample was taken from the outermost rings of the trunk, after the bark was removed on a small area (see Photo 19). The size of the sample was 0,8 cm in length, 0,5 cm wide and 0,3 cm in height (see Photos 20a and 20b). The presence of the bark

provides another plus in what concerns the former chemical treatments of the object (manufacturing, preservations and restorations).

The raw material is considered to be sycamore (*ficus sycamorus*) wood, at least for the item from Budapest<sup>34</sup>. Following the observation according to which the fragment of coffin from Budapest is coming from the left part of the item inv. no. 1142 from Timișoara's museum<sup>35</sup>, the presumption for using the same type of wood is more than logical<sup>36</sup>. Ancient Egyptian artifacts made by sycamore or cedar wood were dated using radiocarbon method, showing very good results, especially when the sampling procedure was done properly<sup>37</sup>.

#### *The AMS dating result*

The sample was sent to the Poznan Radiocarbon Laboratory (Poland) for an AMS data and it was registered under the label *Silvas 1*. The obtained date is Poz-78168: 2875±35 BP<sup>38</sup>, which is, as 1 $\sigma$  calibrated date, 1112–1006 cal BC, the mean value being situated at 1053 cal BC (see Images 8 and 9). The calibrated value of the date was obtained using OxCal v. 4.2<sup>39</sup>.

For 21<sup>st</sup> Dynasty are available 31 radiocarbon dates from which 12 are AMS<sup>40</sup>. Eight AMS dates from this database were obtained from sampling objects belonging to the reign of Amenemnesu, the second pharaoh of the 21<sup>st</sup> Dynasty (OxA 20060 – OxA 20067) and they are in a very good agreement to our date (see in this respect Images 10 and 11).

This result allows us to assert that the wood used for making the side-wall of the sarcophagus was cut down around the middle of the 11<sup>th</sup> century BC. This detail supports the idea of an existing time span used for drying the wood, in order to manufacture the planks and consequently to build up the sarcophagus.

<sup>34</sup> Liptay 2011, 65.

<sup>35</sup> Anđelković, Teeter 2015, 212, n. 6.

<sup>36</sup> See Anđelković, Teeter 2015, 209–210. The authors are showing, still, doubts about the provenance of the wood. The same remark is valid for Anđelković, Demian 2016, 91.

<sup>37</sup> Dee *et al.* 2012, 881, Table 1 presents the fact that 129 wood samples from Dynastic Egypt offer an accuracy of 78% comparing with the historical dates. See also in this respect Libby 1960, 602, Fishman *et al.* 1977, 195–204, Manning *et al.* 2014. The quoted results of <sup>14</sup>C analysis from Fishman *et al.* 1977 are dating artifacts belonging to the 11<sup>th</sup>, 12<sup>th</sup>, 17<sup>th</sup>–21<sup>st</sup> Dynasty.

<sup>38</sup> This BP value is in a good agreement with the conventional dates obtained by Fishman *et al.* 1977 for 21<sup>st</sup> Dynasty (see dates P-1955, P-1956, P-1954, P-1818, P-1816, P. 1871).

<sup>39</sup> See Bronk Ramsey 2009 and Reimer *et al.* 2009.

<sup>40</sup> See ERD.

<sup>32</sup> Anđelković, Teeter 2015, 212.

<sup>33</sup> Taylor, Bar-Yosef 2014, 67.

The date's value doubled by the presumptions from above is in a very good agreement with the dating done after a stylistically analysis of the depicted scenes (i.e. ca 1039 cal BC)<sup>41</sup>. This year marks, historically, the end of the Amenemnesu's reign and the beginning of the Psusennes I's rule, in other words the year between the reign of the second pharaoh and the third one of the 21<sup>st</sup> Dynasty.

### Conclusions

All the matters discussed above prove clearly the authenticity of this item and consequently of all the fragments from this coffin. The calibrated value of the AMS result is in a very good agreement with the stylistically and historically dating. The methodology of sampling looks correct and proves once again the possibility of checking the authenticity of these types of items using the radiocarbon method.

Starting from this point and being supported by the description of the rather poor preservation status we can underline the importance of classifying these artifacts into one of the Romanian National Cultural Heritage categories (Fund or Thesaurus) and also to emphasize the imperious necessity of restoration for the items manufactured by wood from the Egyptian collections<sup>42</sup>.

### Acknowledgements

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<sup>41</sup> See Andelković, Teeter 2015, 210 and Andelković, Demian 2016, 92.

<sup>42</sup> In this respect is important to compare to the preservation status of the object from Budapest (see Liptay 2011, plate 18, no. 51.325), which was restored still in 1958.

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Photo 1: The item with inv. no. 1142



Image 1: The dimensional data of the item with inv. no. 1142



| Nr. curent | Data înscrierii |       |      |   | Nr. de inventar | Denumirea Obiectului  | Descrierea obiectului (cu sa arta materialul, tehnica si dimensiunile obiectului) | Starea de conservare | Provenienta (Ex. cercetari pe teren, cumparare, daruri, etc. Sa se indicala sursa de unde a provenit) | Nr. obiectelor |           |         | Valoarea (din punct de vedere material) | CLASIFICAREA OBIECTELOR |   | Data, metoda si cantitatea rufii din patrimoniul muzeului | OBSERVAȚII |
|------------|-----------------|-------|------|---|-----------------|---|---|----------------------|---|----------------|-----------|---------|---|-------------------------|---|---|------------|
|            | Anul            | Luna  | Ziua | 5 |                 |   |   |                      |   | Total          | Exemplare | Tipuri  |   | Din care                | Familia obiectului (Pentru colecțiile de arta si stiinta) |   |            |
| 1141       | 1958            | 11.12 | 1141 | 1 | Statuie         | Statuie din lemn, înaltă de 10 cm, reprezentând un bărbat în poziție de mers. | buclă   | Egipt                | 1   | 1              | 1         | 35 lei  | Egiptean                                | Lemn                    | III 3036  | 3606  |            |
| 1142       |                 |       | 1142 | 1 | Statuie         | Statuie din lemn, înaltă de 10 cm, reprezentând un bărbat în poziție de mers. | buclă   | Egipt                | 1   | 1              | 1         | 100 lei |   |                         | I 2923  | 3607  |            |
| 1143       |                 |       | 1143 | 1 | Statuie         | Statuie din lemn, înaltă de 10 cm, reprezentând un bărbat în poziție de mers. | buclă   |                      | 1   | 1              | 1         | 40 lei  |   |                         | III 3038  | 3608  |            |
| 1144       |                 |       | 1144 | 1 | Statuie         | Statuie din lemn, înaltă de 10 cm, reprezentând un bărbat în poziție de mers. | buclă   |                      | 1   | 1              | 1         | 40 lei  |   |                         | III 3038  |   |            |
| 1145       |                 |       | 1145 | 1 | Statuie         | Statuie din lemn, înaltă de 10 cm, reprezentând un bărbat în poziție de mers. | buclă   |                      | 1   | 1              | 1         | 40 lei  |   |                         | III 3038  |   |            |
| 1146       |                 |       | 1146 | 1 | Statuie         | Statuie din lemn, înaltă de 10 cm, reprezentând un bărbat în poziție de mers. | buclă   |                      | 1   | 1              | 1         | 40 lei  |   |                         | III 3038  |   |            |
| 1147       |                 |       | 1147 | 1 | Statuie         | Statuie din lemn, înaltă de 10 cm, reprezentând un bărbat în poziție de mers. | buclă   |                      | 1   | 1              | 1         | 40 lei  |   |                         | III 3038  |   |            |
| 1148       |                 |       | 1148 | 1 | Statuie         | Statuie din lemn, înaltă de 10 cm, reprezentând un bărbat în poziție de mers. | buclă   |                      | 1   | 1              | 1         | 40 lei  |   |                         | III 3038  |   |            |
| 1149       |                 |       | 1149 | 1 | Statuie         | Statuie din lemn, înaltă de 10 cm, reprezentând un bărbat în poziție de mers. | buclă   |                      | 1   | 1              | 1         | 40 lei  |   |                         | III 3038  |   |            |
| 1150       |                 |       | 1150 | 6 | Statuie         | Statuie din lemn, înaltă de 10 cm, reprezentând un bărbat în poziție de mers. | buclă   |                      | 1   | 1              | 1         | 40 lei  |   |                         | III 3038  |   |            |

Image 2: The photo-copy of the page from the inventory register of the Banat Museum showing the position of the items with inv. no. 1142-1146.



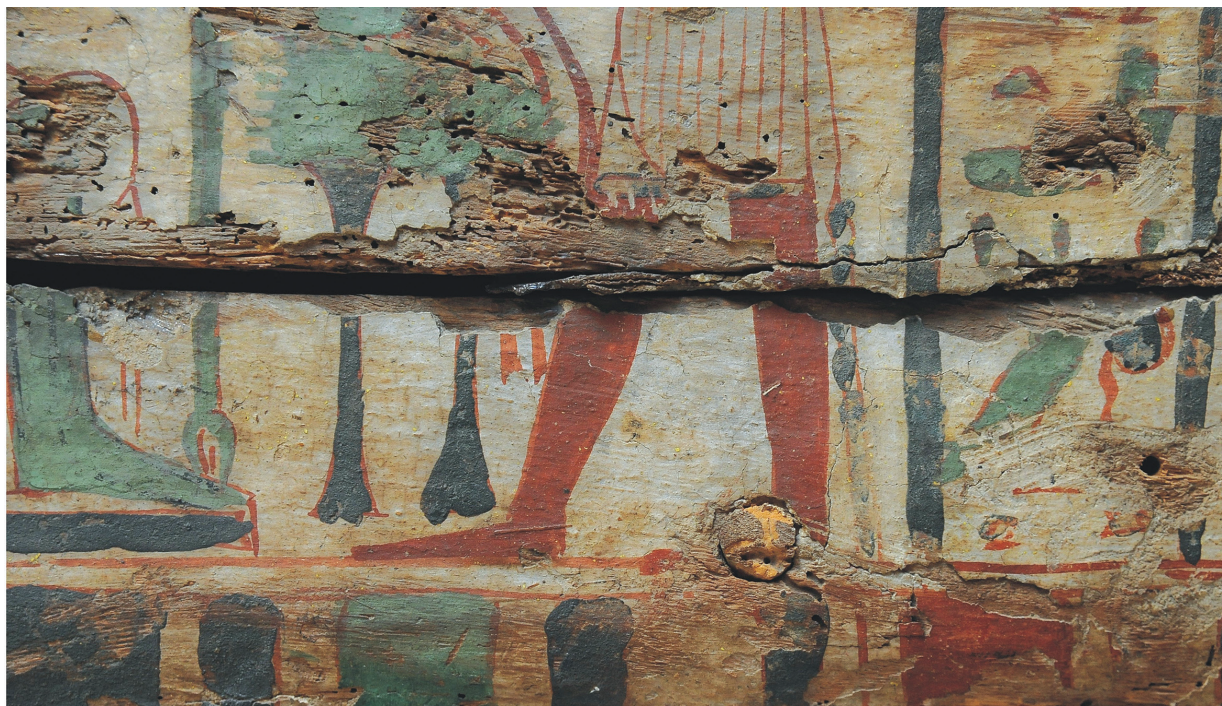


Photo 2a: Details with the wooden dowels used for assembling the coffin, from which the item with inv. no 1142 is part





Photo 2b: Details with the wooden dowels used for assembling the coffin, from which the item with inv. no 1142 is part





Photo 3a: A detail regarding the effects of the wood and glue dehydration that led to the detachment of the smallest fragment of plank



Photo 3b: A detail regarding the effects of the wood and glue dehydration that led to the detachment of the smallest fragment of plank





Photo 4a: A detail with an area where the textile used for feeling the gaps between the planks is more visible

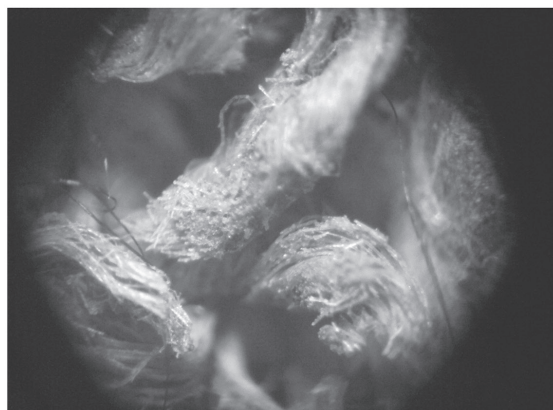
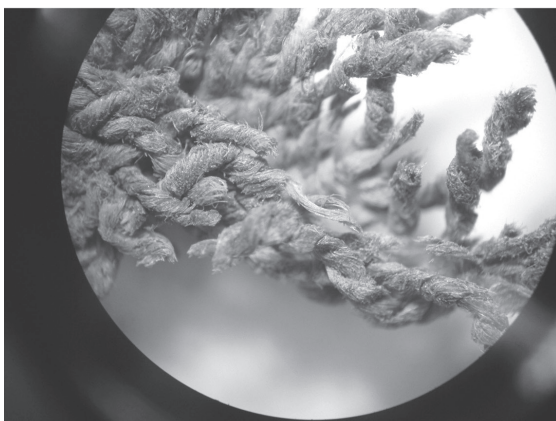
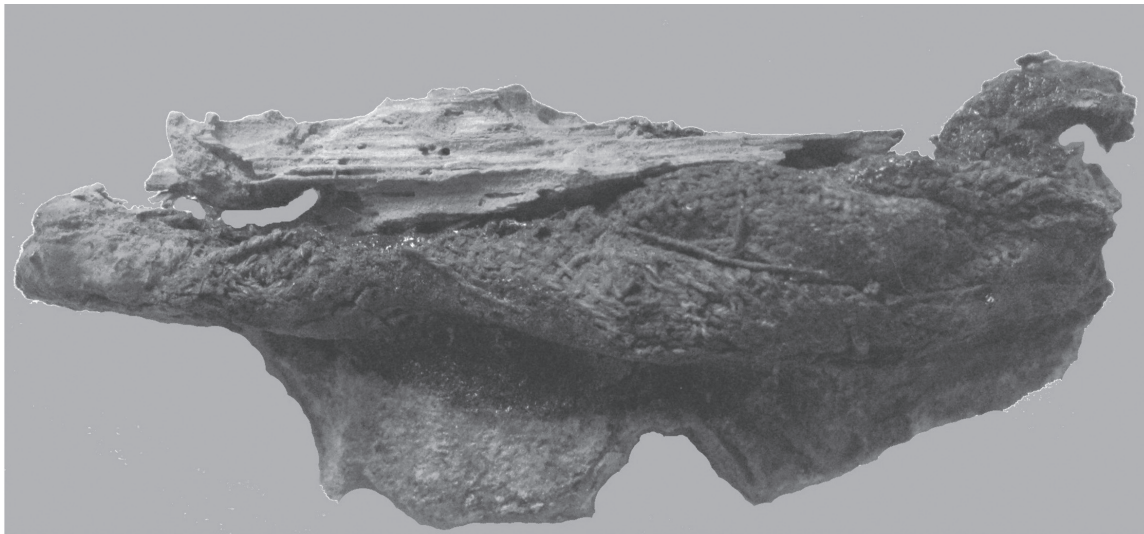


Photo 4b: Detached fragment of the inner gesso together with a piece of textile and microscope photos of the textile structure

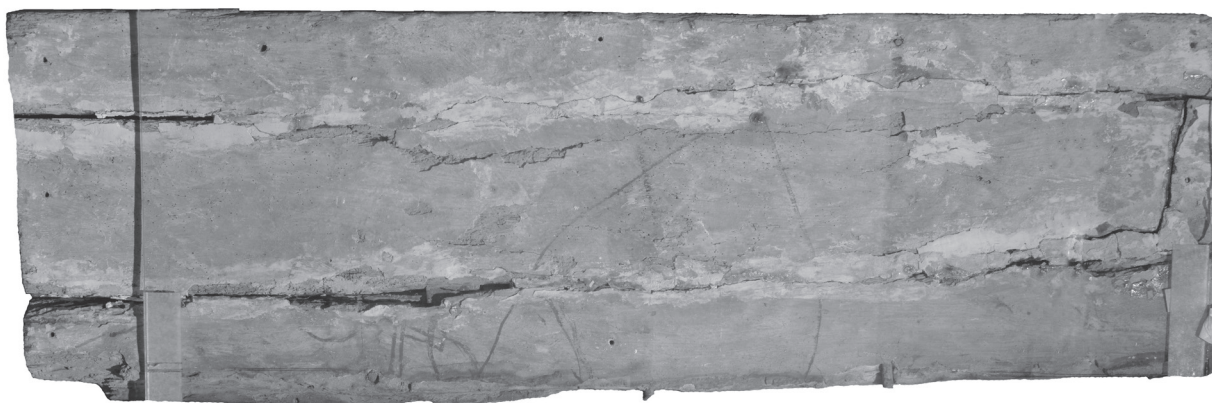


Photo 5: The verso of the item with inv. no. 1142





Photo 6: A detail of the area where the gesso is thickened due to the irregular surface of the composing planks





Photo 7: The apertures from the upper edge of the item with inv. no. 1142 used for fastening the lid of the coffin with its lower part





Photo 8: Details of the lower edge of the item with inv. no. 1142 showing the marks of the breakage of the side wall from the floor panel of the coffin



Image 3: The designation of the painted layer gaps from the item with inv. no. 1142





Image 4: The designation of the painted layer gaps from the item with inv. no. 1142 caused by the thinness of the gesso layer





Photo 9: A detail of the area from where the painted layer is missing, caused by the thinness of the gesso



Photo 10: A detail of the painted surface showing the craquelures from the painted layer's surface, caused by the aging phenomenon



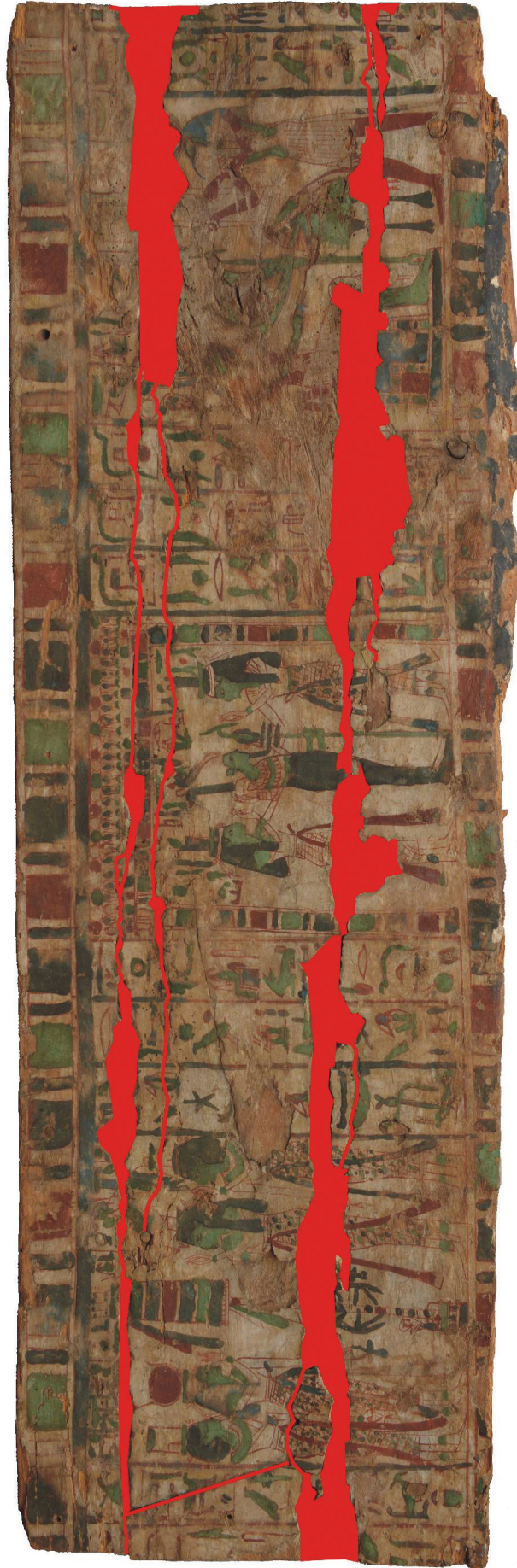


Image 5: The designation of the painted layer gaps from the item with inv. no. 1142 caused by the fissures appeared between the composing planks



Image 6: The designation of the fissures, marked accordingly, appeared on the verso of the item with inv. no. 1142





Image 7: The designation of the painted layer gaps from the item with inv. no. 1142 caused by the detachment of the gesso





Photo 11: A detail of the lower edge of the item with inv. no. 1142, where the painted layer is missing, caused by the breakage of the side wall from the floor panel of the coffin



Photo 12: A detail with the upper edge of the item with inv. no. 1142, where the painted layer is missing, caused by inappropriate handling of the item during time





Photo 13: The item with inv. no. 1142 at the time of its returning from Cluj, having assembled on the back a rectangular piece of plywood



Photo 14: A detail of the traces of the wood screws on the verso of item with inv. no. 1142

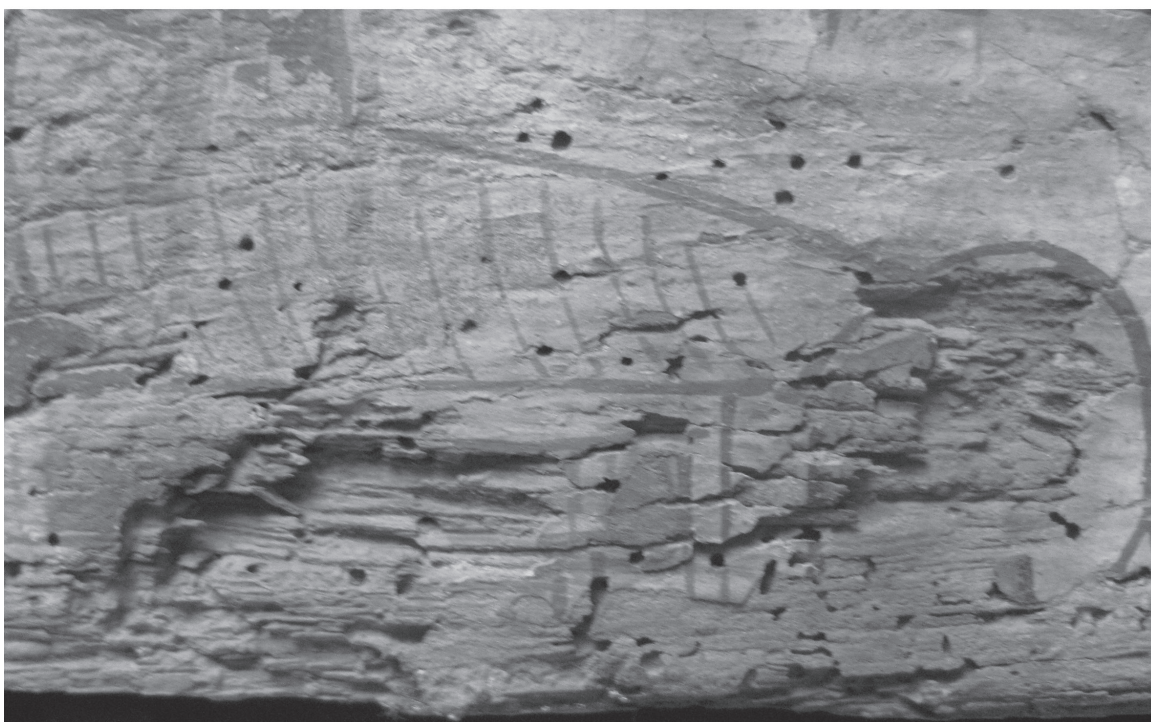
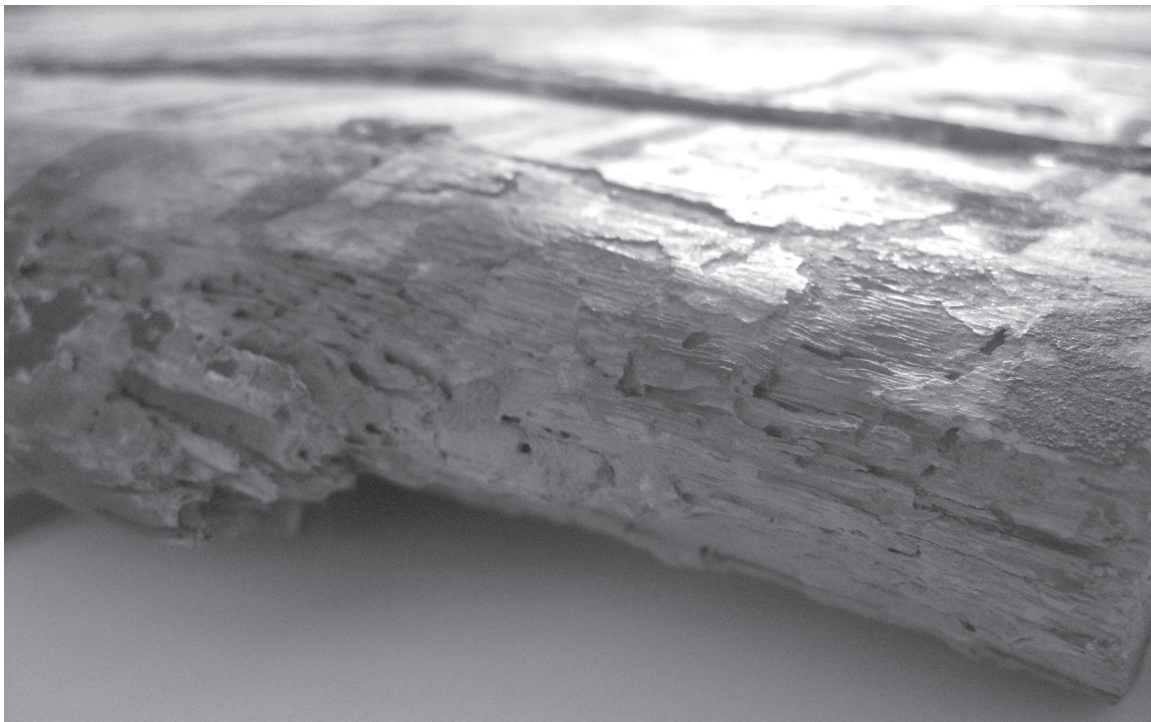


Photo 15a: Details showing the traces of the xylophagous insects' infections



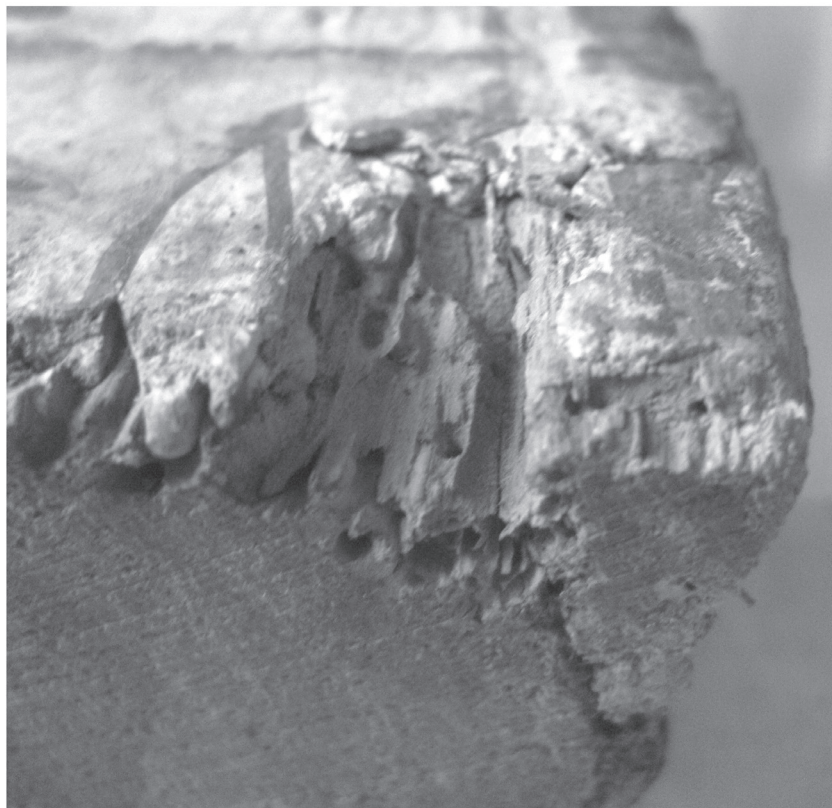


Photo 15b: Details showing the traces of the xylophagous insects' infections

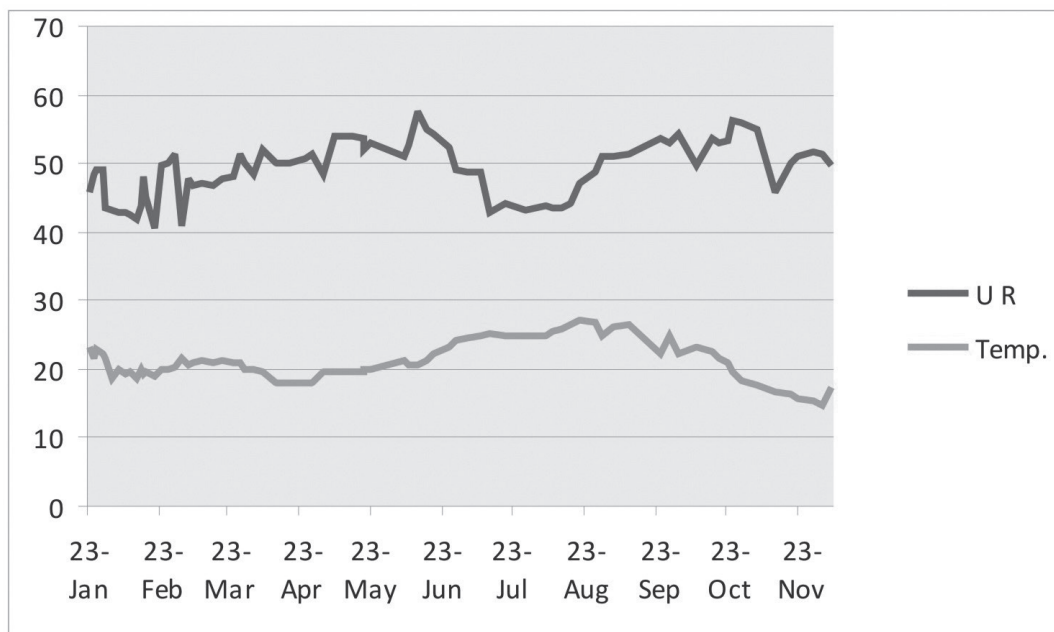


Photo 16a: A detail showing patches caused by pluvial water leakage on the painted layer of the item with inv. no. 1142

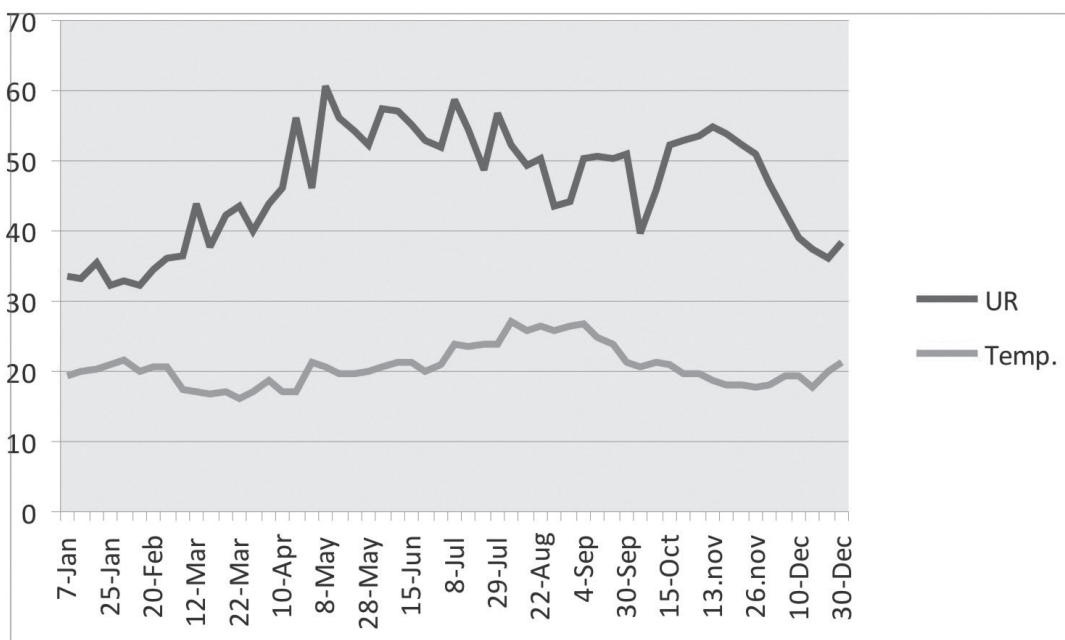




Photo 16b: Details showing patches caused by pluvial water leakage on the upper edge of the item with the inv. no. 1142

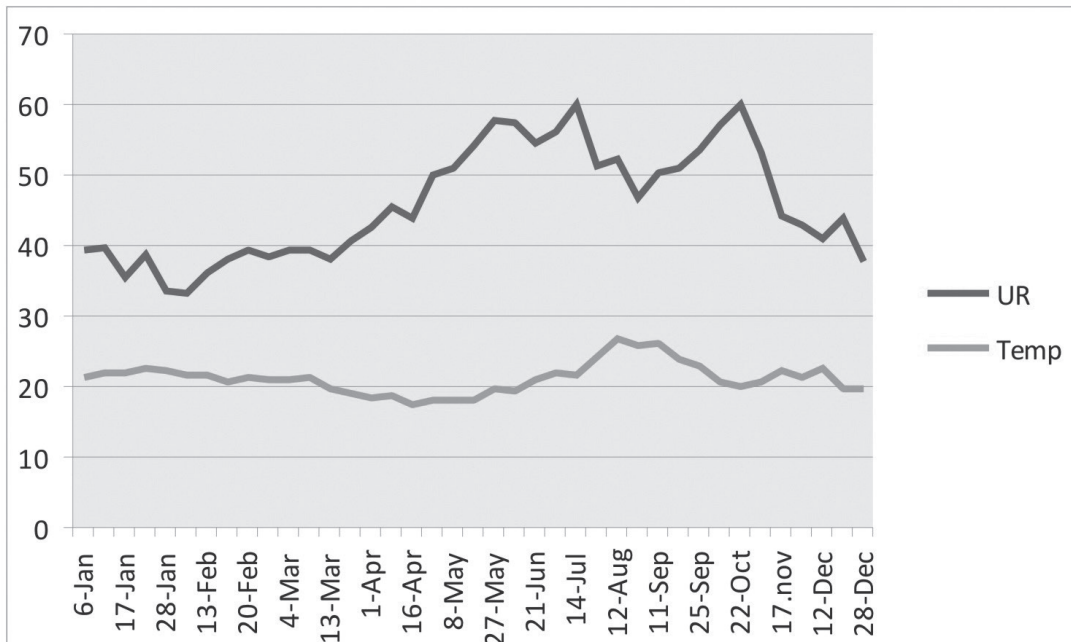


Graphic 1: The variations of the temperature and relative humidity during 2012 from the deposit where item with inv. no. 1142 is hosted

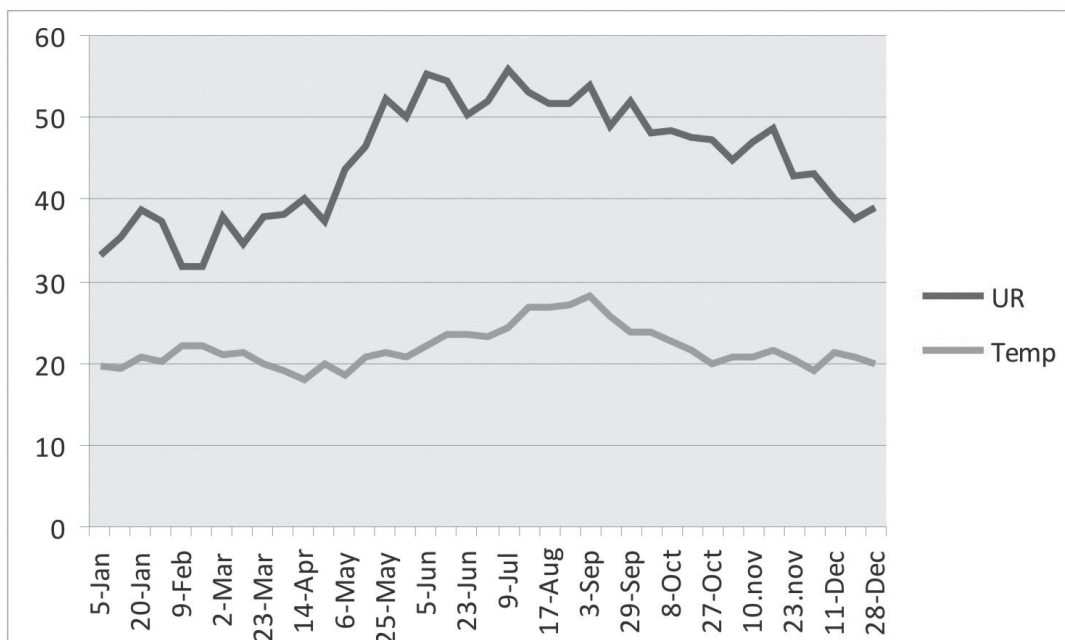


Graphic 2: The variations of the temperature and relative humidity during 2013 from the deposit where item with inv. no. 1142 is hosted





Graphic 3: The variations of the temperature and relative humidity during 2014 from the deposit where item with inv. no. 1142 is hosted



Graphic 4: The variations of the temperature and relative humidity during 2015 from the deposit where item with inv. no. 1142 is hosted



Photo 17: A detail of the left side of the item with inv. no. 1142



Photo 18: A detail of the left edge of the lower plank from the item with inv. no. 1142, showing the complete structure of the trunk, including the bark of the tree





Photo 19: A detail during the sampling procedure, right after the removal of a small area from the bark



Photo 20a: A detail of the sampled spot



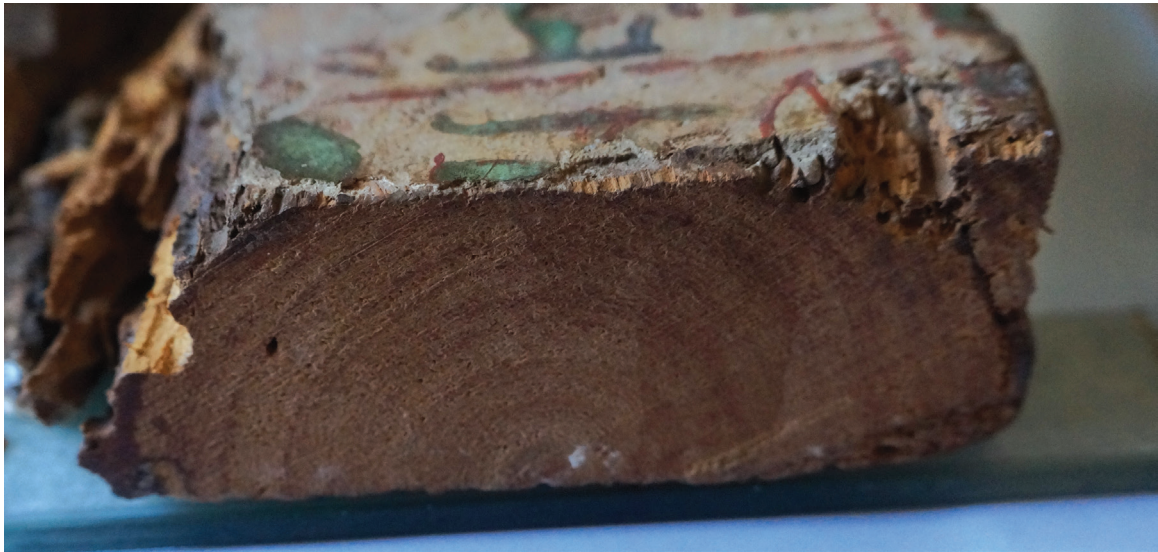


Photo 20b: A detail of the left edge of the lower plank from where the sample was procured, pointing that the outer rings were targeted



Photo 21: An overview of the item with inv. no. 1142 showing the sampled spot





Photo 22: The item with inv. no.1142 having the sampling spot marked accordingly and the designation of the same spot enlarged

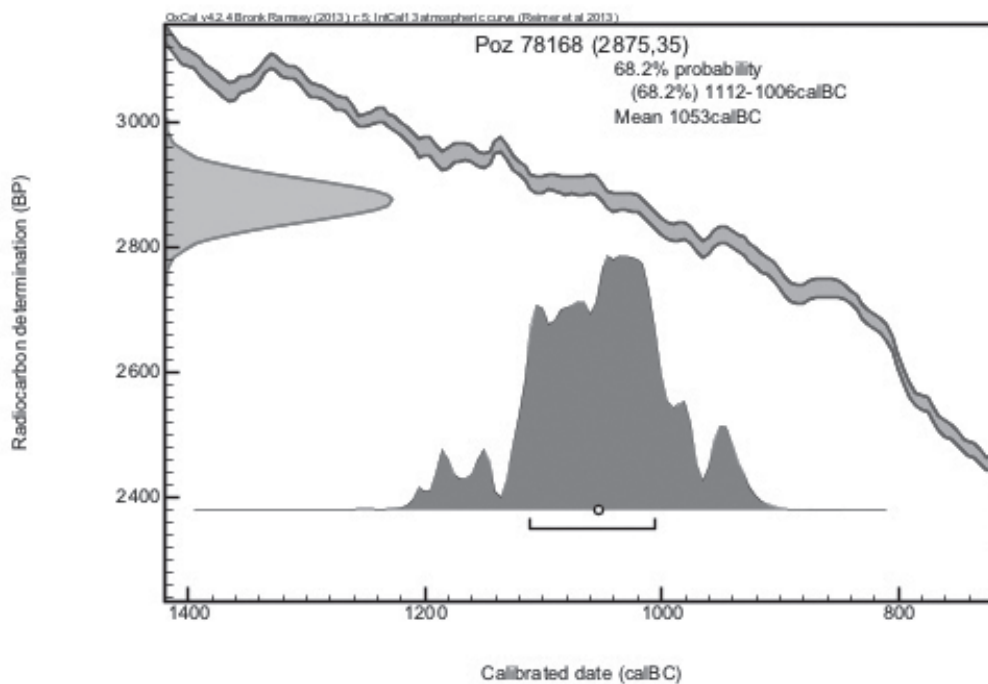


Image 8: The diagram of the  $1\sigma$  (68,2% probability) calibrated value of the date Poz–78168

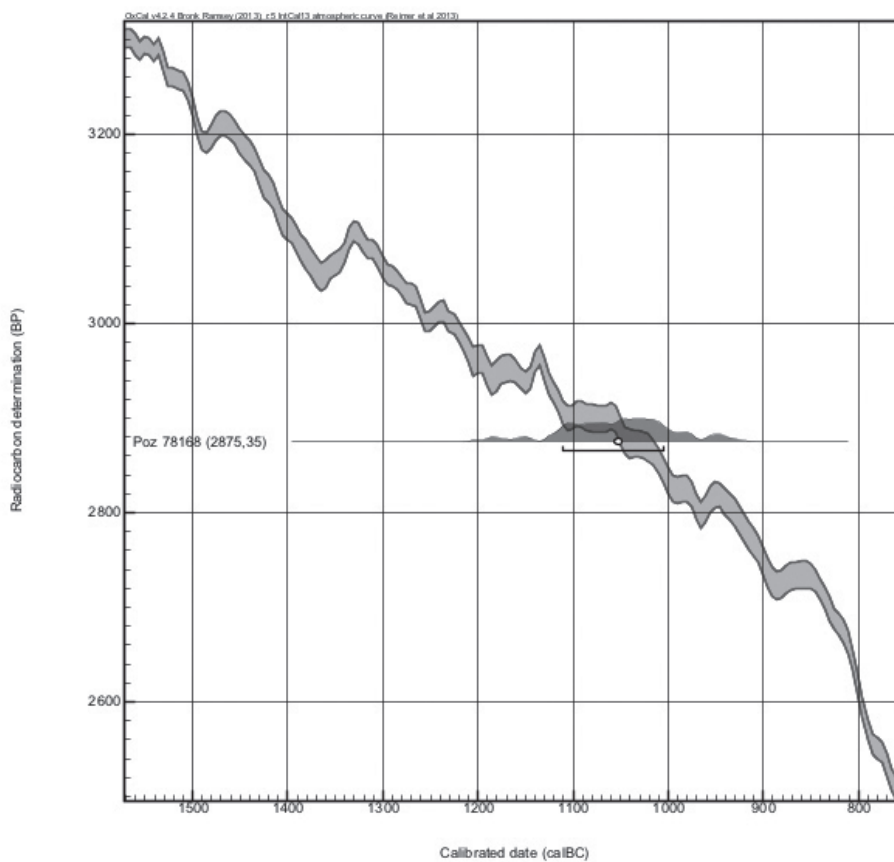


Image 9: The position of the calibrated value of the date Poz–78168 on the calibration curve



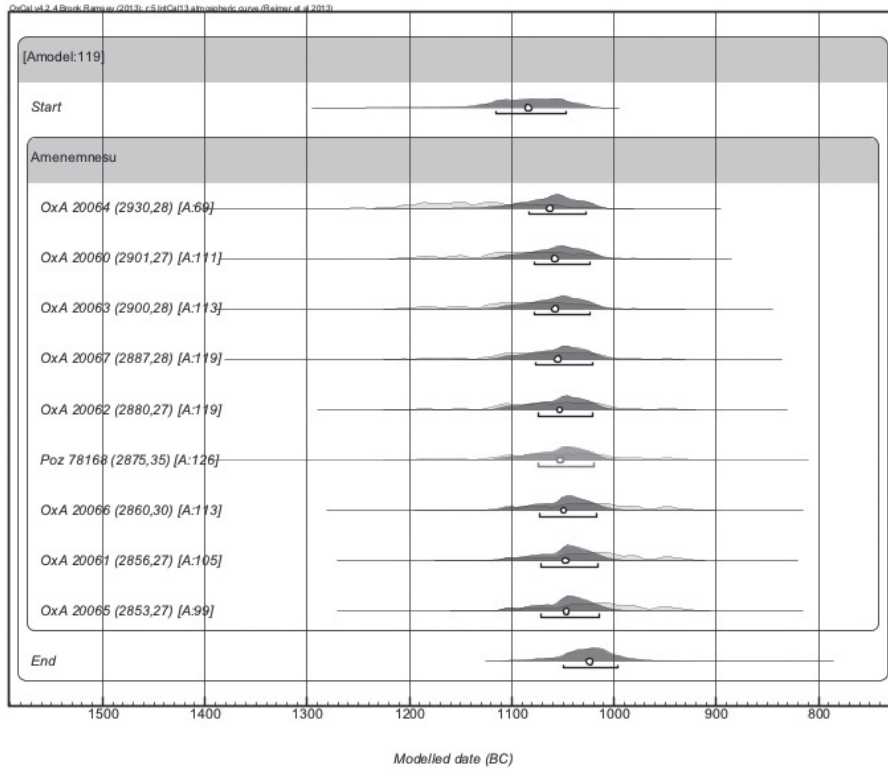


Image 10: The bounded phase corresponding to the 21st Dynasty, built using the AMS existing data for this historical epoch, showing the date Poz-78168 marked in red.

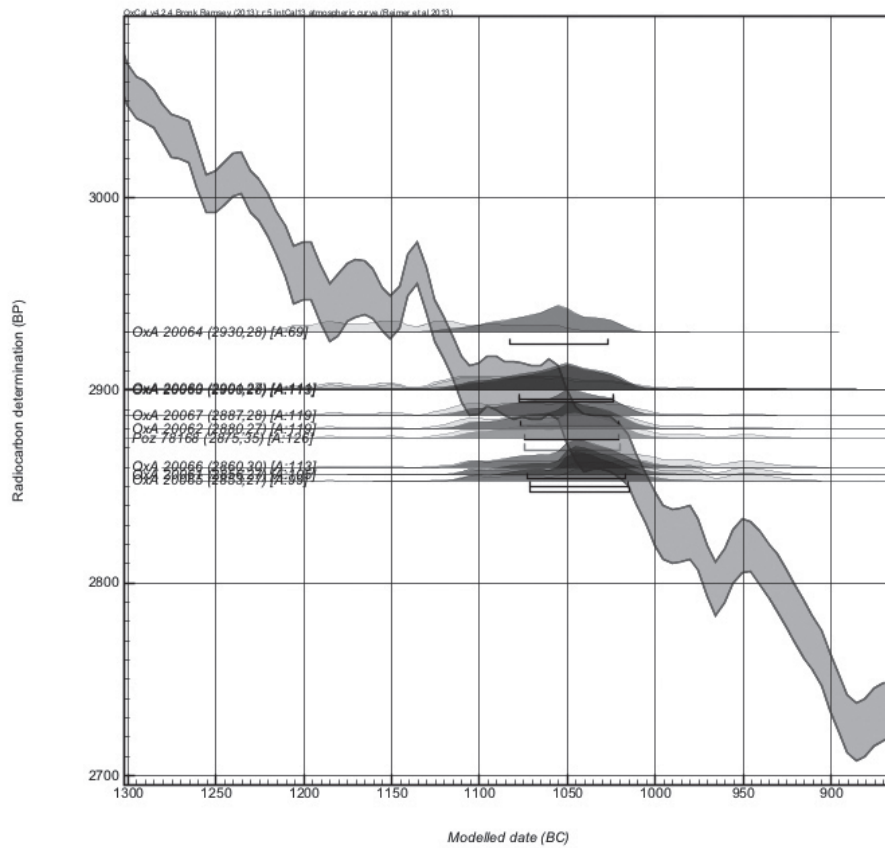


Image 11: The position on the calibration curve of the phase corresponding to the 21st Dynasty, showing the date Poz-78168 marked in red.

