Plants of embalming in Modern Times: archaeobotanical results from the Jacobins’ Convent at Rennes (Brittany, France)
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A rescue excavation was conducted by the INRAP (2011-2013) in Les Jacobins’ convent at Rennes (Brittany, France). About 800 burials including lead coffins dated to the 17th century have been uncovered together with 5 lead reliquaries (cardiothaphs); 4 of them had an inscription revealing the identity of the deceased.

The anthropological analyses revealed marks of post-mortem manipulations of some of the skeletons: skulls were sawed and sterna were cut. In addition, compacted stuff were filling the cavities of any bodies, as well as the hearts in the cardiothaphs. These evidences testified embalming practices which were restricted to the social elites (Mafart et al. 2004; Georges 2006; Devriendt et al. 2012).

The burials which presented embalming evidence were sampled for several organic remains analyses at different locations in the lead coffin, in the different body regions and inside and outside the hearts in the cardiothaphs, as well. To date, 2 cardiothaphs (#3 & 5) and 1 coffin (1001) provided positive results for plant remains. The sporo-pollinic material was extracted according to the current physic-chemical techniques, and analysed with a transmission photonic microscope. Sub-fossil plant macro-remains, dry, charred or mineralized, have been sampled without sieving and directly sorted in water under the stereomicroscope.

MAIN PLANT INGREDIENTS

The different preserved plant remains (pollen, flowers, stems, twigs, leaves, fruits or seeds) which are the embalming ingredients revealed a high taxonomic diversity (70 taxa). Hearts #3 & 5 provided 59 more or less precisely identified taxa. Some of these plants were used because of the aromatic and antiseptic properties of their organs. They are frequently mentioned in the 17th century recipe treatises (Ruas 1992; Corbineau 2014): blooming plant of mugwort, camomile, oregano, lesser calamint, lavender, thyme and rosemary leaves, fennel and juniper fruits.

Fragments of cloves, a common spice also used in the recipes, are the only exoctic plant identified at Les Jacobins (Heart #3). Myrtus-type pollen may also come from flowers imported from the Mediterranean region. Flax tow was filling the cavity of the cardiothaph and the hearts. Charcoal (Angiospermae) testified the use of ashes.

Two different recipes were used for preparing the dough filling the two hearts. With 6 different morphotypes, the Lamiaceae largely predominated the pollen spectrum of heart #5 (80%); the latter mostly provided fennel seeds and lavender flowers. Heart #3 mainly yielded Asteraceae pollen (Anthemis-type) and Lamiaceae (unident.); macro remains analyses evidenced camomile flowers and rosemary leaves.

Much noticeable is the over-representation (>80%) of Beta-type pollen in burial #1001. Conversely, there is not any mention of Amaranthaceae among ca. hundred plant ingredients which are mentioned in the 17 pieces of texts that we analysed (surgery and pharmacological encyclopaedias, and 14-19th c. embalming reports (Corbineau 2014). This burial opens new reflections avenues about the funerary practices during the Modern times.

MAIN PLANTS RECORDED BY MACRO-REMAINS & POLLEN HEARTS 17TH C. AD

<table>
<thead>
<tr>
<th>VEGETATIVE</th>
<th>FLOWER</th>
<th>FRUIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEAF</td>
<td>TWIG</td>
<td>STEM</td>
</tr>
<tr>
<td>Rosmarinus officinalis</td>
<td>Thymus vulgaris</td>
<td>Origani furfuraceae</td>
</tr>
</tbody>
</table>

Plant macro-remains from the infilling of two hearts. The size of some fragments suggests that the dried plants were crushed and coarsely cut (size 1-2 mm). Oils and resins mixed with the plant powder still strongly smelt during our analysis.

REFERENCES

Corbineau R. 2014. Pour une archéobotanique funéraire enquêtes interdisciplinaires et analyses polliniques autour de la tombe et du corps mort (Île de Châlons, France – buis, thèse doctorale, Université du Maine, 595 p.).


Coffin #1001: lead coffin with an inscription containing heart #5. 3 lead cardiothaphs (CA) are visible at the head of the coffin, including heart #3.