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SARCOPHAGUS LIDS SAWN FROM THEIR CHESTS

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Abstract

The contrast between smooth and rough surfaces on the backs of some sarcophagi in central Italy has been the subject of attention in recent years, and several mistaken or partial explanations for the phenomenon have been advanced. Close visual observation of sarcophagi in Naples and Ostia, however, makes it possible to explain the mixture of techniques more completely and gives further insight into the production process for sarcophagi in central Italy.

Keywords

Badminton Sarcophagus, quarries, central Italy, trade, manufacture

The problem: rough and smooth zones on the backs of Central Italian sarcophagi

It is well known that during the second and third centuries marble quarries in the Aegean area exported rough chests for sarcophagi to Rome, where sculptors carved the figures, garlands, and other ornaments. The decoration carved in Central Italy always covered the front and usually the ends, while the back of the chest was usually left undecorated. Normally the unfinished backs remain roughly chiseled, just as they came from the quarries. Examination of finished sarcophagi of Roman type, however, also shows that in many cases smooth, almost polished-looking surfaces appear, not only on backs but also on sides and bottoms (HERRMANN *et al.* 2015, table I).

Shipwrecked cargoes of sarcophagi have provided insight into the issue, and several hypotheses based on them have provided explanations for these smooth areas on hidden or undecorated parts of Roman sarcophagi. Two cargoes of roughed-out sarcophagi have been found off the southeastern coast of Italy near Taranto: one of 15 sarcophagi off Torre Sgarrata (GABELLONE *et al.* 2009) and another of about 23 sarcophagi off S. Pietro in Bevagna (WARD PERKINS, THROCKMORTON 1965; GIANNOTTA *et al.* 2015). All the sarcophagi were quarried on the island of Thasos, and all their surfaces were

roughly chiseled except for one smooth saw-cut end. This makes it clear that most of the sawing seen in finished sarcophagi of Roman type must have taken place in Italy. In several cases two sarcophagi were shipped together as a single block. Other sarcophagi had an excessively thick side (Fig. 1). Sawing would have been needed at their intended destination to separate the two chests that were joined together, and it would have been necessary to cut the thick sides of others down to a normal width. The additional slabs produced in the process could be used as lids or for other purposes. (GABELLONE *et al.* 2009; GIANNOTTA *et al.* 2015; HERRMANN *et al.* 2015). The sawing was performed with a wire and wet sand.

The backs of some sarcophagi, however, show a puzzling mixture of smooth and rough surfaces that is not accounted for by these explanations. The division is usually tripartite, with a very smooth, saw-cut zone below, a roughly chiseled zone above, and a more finely chiseled band between them. The famous Badminton Sarcophagus

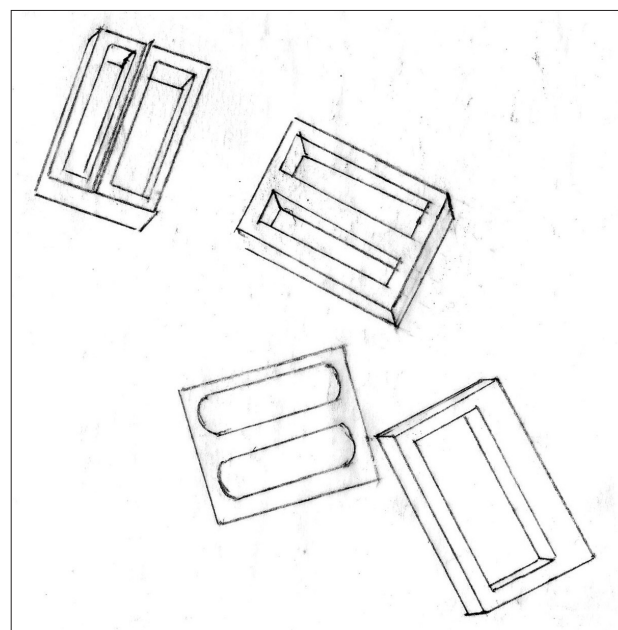


Fig. 1. Double sarcophagi and a thick-sided sarcophagus, S. Pietro wreck, early 3rd century, drawing by John Herrmann after M. Valtinos in WARD PERKINS, THROCKMORTON 1965, 208-9



Fig. 2.
Badminton Sarcophagus, back view, ca. 220-270 CE: The Metropolitan Museum of Art, Purchase, Joseph Pulitzer Bequest, 1955 (55.11.5). Image © The Metropolitan Museum of Art



Fig. 3. Double sarcophagus combining a large sarcophagus, a child's sarcophagus, and possibly a lid from the Torre Sgarata Wreck, marble from Aliko, Thasos, Taranto Museum, ca. 200 CE

of the third century in the Metropolitan Museum of Art, New York is an often-discussed example of this mixed treatment (Fig. 2) (VAN KEUREN *et al.* 2015). The rough and smooth divisions have been interpreted as the battered remains of an architectural profile: the smooth lower part would have been the frieze and the rough upper part, the remains of a hammered-down cornice (BARTMAN 1993, 57-60, Figs. 2-5; HERRMANN 2012, 99-100). Neither the Badminton Sarcophagus nor any others, however, have projections on the backs that correspond closely to the profile of an entablature, nor do traces remain of any original architectural decoration that was hammered down. The polished zone, moreover, resembles a saw-cut surface more than one worked by an architectural sculptor.

One unfinished sarcophagus from the Torre Sgarata shipwreck shows a situation that might explain the partial sawing of the back. The chest has a projection from the lower part of one long side (Fig. 3) (GABELLONE *et al.* 2009, fig.10; HERRMANN *et al.* 2015). This could have been sawed off to produce either a child's sarcophagus or a slab, which could perhaps have been used as a lid (HERRMANN *et al.* 2015). In this case the result would be a mixture of rough and smooth surfaces.

Lids cut from their chest

Close observation of finished sarcophagi in museum collections suggests another reason for the partial sawing of backs of chests: flat lids with vertical risers, a typical form of Roman sarcophagi of the third century and fourth century, were extracted from the backs and bottoms of sarcophagus chests. The lids themselves would be sawed from the bottom of the chest and the low riser would be sawed from the lower part of a long side. Since the riser was not as high as the full height of the chest, the saw cut would be confined to the lower part of the chest. This reconstruction is based on the study of two sarcophagi that appear to preserve their original lids, one in Naples and one in Ostia. Both sarcophagi appear to date from the late third or early fourth century.

The strigillated sarcophagus in Naples

A round-ended sarcophagus (*lenos*) in the Museo Nazionale Archeologico, Naples has a smooth and a rough area on its back that have been noted before but not interpreted correctly (Fig. 4b) (HERRMANN 2012, 100, table III, fig. 10). The underside of the chest is also smooth. The polished-looking areas are the products of sawing, and indicate that a typical central Italian type of lid was removed from the lower back and underside of the chest. The top of the horizontal lid of this chest and the back of its riser are also smooth saw-cut surfaces, and optical inspection reveals that the patterns of veining on the saw-cut sections of the lid match those on the chest in mirror images. The lid was apparently cut from the lower parts of this chest, rotated 180 degrees, and placed on top of the chest with the riser facing the front (Fig. 4c).

Corner "A" bottom left (as labeled in Fig. 4b and the Fig. 5a) has two broad grey stripes that move from the outer edge diagonally upward. These stripes are also visible in corner "A" of the lid, again moving diagonally from the edge upward (Fig. 4b and 5a). The upper corner of the saw-cut register of the chest has a clearly evident curve, which once more matches the curve of this corner of the lid.



Fig. 4a.
Front of a strigillated *lenos* with Cupids holding birds at the corners and its lid with sea monsters, probably Proconnesian marble, 280-330 CE, Museo Nazionale Archeologico, Naples



Fig. 4b.
Back of the preceding

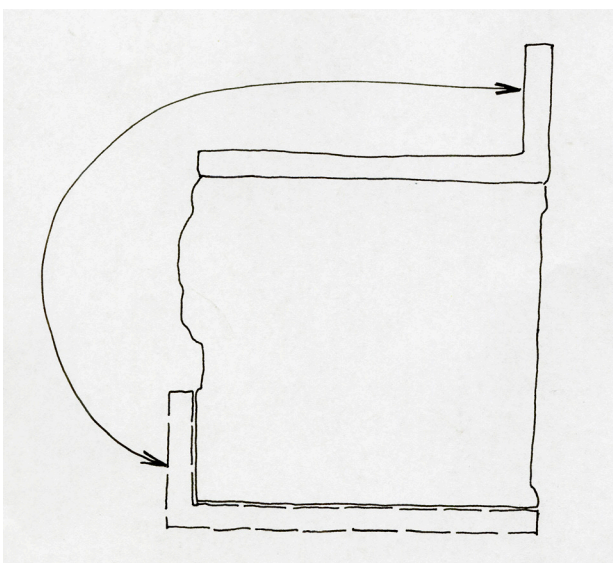


Fig. 4c. Diagram of the preceding showing the extraction and positioning of the lid. The original position of the lid is shown with dotted lines (drawing: S. McPeters)

Corner “B” (as labeled in Fig. 4b and Fig. 6a) has numerous feathered grey stripes that move diagonally upward as they reach the edge; also visible in corner “B” of the lid. In addition, the upper corner of the saw-cut register of the chest is more squared, again the match is visible in the lid.

On the back, a band of relatively fine chiseling passes between the smoothly cut surface below, where the riser was removed, and the rougher chiseling above (Fig. 4a, 5a). The rougher chiseling represents the surface of the chest as it was removed from the quarry, and the finer chiseling probably represents work done in Central Italy to insert the wire for sawing off the riser of the lid.

The Ostia Hunt Sarcophagus

It has previously been demonstrated that a sarcophagus with a hunting scene in the Ostia Museum, inv. 36231 has a lid with a riser cut from the lower part of its chest (Fig. 7) (HERRMANN *et al.* 2015, 561, fig. 6).



Fig. 5a, 5b. Details of the preceding: matching “A” corners of chest and lid



Fig. 6a, 6b. Details of the preceding: matching “B” corners of chest and lid



Fig. 7. Lion Hunt *lenos*, probably Proconnesian marble, 290-320 CE, Ostia Museum, inv. 36231 (photo: A. van den Hoek)



Fig. 7a. Details of the preceding: Blind cracks in chest and riser reveal that the lid was cut from the lower part of the chest. Arrows point to the locations of the matching blind cracks

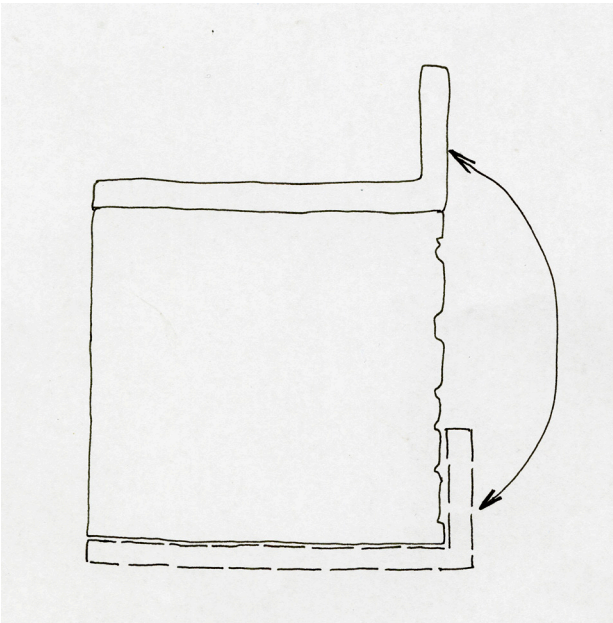


Fig. 8. Diagram of the preceding showing the extraction and positioning of the lid. The original position of the lid is shown with dotted lines (drawing: S. McPeters)

Conspicuous cracks in the right side of the chest match similar cracks in the lid. In this case, the horizontal part of the lid was again sawn from the bottom of the chest, but the riser was taken from a bulge on the front. The top of the lid, the back of the riser, and the bottom of the chest are smooth saw-cut surfaces. The lid and riser were moved to the top of the chest without rotation. Decorating the front of the chest with figures cancelled traces of the sawing that detached the riser. The back of the chest is entirely smooth, indicating that a large slab was removed for some unknown purpose.

Conclusions

These two instances of extracting a typical central Italian lid with riser from the lower part of a sarcophagus chest clearly are important indexes to a widespread practice. The many sarcophagus chests of Roman type whose backs reveal a saw-cut lower zone and a projecting, roughly chiseled upper zone are testimony to the practice. The smoothly sawn bottoms of these chests confirm the procedure (HERRMANN *et al.* 2015, table I). This procedure best explains the mixture of techniques seen on the back of the Badminton Sarcophagus (Fig. 2).

The situation shows coordination between quarries in the east and their markets in the west. Sarcophagus chests were hollowed out in eastern quarries to reduce their weight for shipment and reduce work for the sculptors in Italy, but extra material was left on the back and bottom for flat lids with risers, a type of lid used in central Italy but not in the East. The extra material would have increased the weight, but this inconvenience was considered worthwhile in the interest of having a good match between chest and lid.

Coordination between quarries in the Aegean area and markets in central Italy has long been noted; round-ended *lenoi*, were made in the East exclusively for use in the West (KOZELJ *et al.* 1985; HERRMANN 1990, 74). It has recently been pointed out, moreover, that the coordination goes well beyond this (GIANNOTTA *et al.* 2015, 145-146, 151). The roughly shaped sarcophagus chests from the Vathy/Saliara quarries found in the S. Pietro in Bevagna wreck include both *lenoi* with projections on the side for the heads of lions and *lenoi* without these projections. Some of the S. Pietro chests are rectangular rather than round-ended. The proportions of the chests vary greatly. This variety in roughed-out sarcophagi from the same quarry or group of quarries undoubtedly reflects detailed specifications from central Italy. The accommodations made for the extraction of lids from the back and sides of roughed-out chests can now be added to this list of adaptations.

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BIBLIOGRAPHY

- BARTMAN E. 1993: "Carving the Badminton Sarcophagus", *Metropolitan Museum Journal* 28, 57-75.
- GABELLONE F., GIANNOTTA M. T., ALESSIO A. 2009: "The Torre Sgarrata Wreck (South-Italy): Marble Artefacts in the Cargo," in *ASMOSIA VII*, 319-331.
- GIANNOTTA M. T. *et al.* 2015: "Provenance of the Roman Marble sarcophagi of the San Pietro in Bevagna Wreck," in *ASMOSIA X*, 143-153.
- HERRMANN J. 2012: "Late Roman Sarcophagi in Central Italy Made from Scavenged Blocks", in *ASMOSIA IX*, 93-103.
- HERRMANN J., BRUNO M., VAN DEN HOEK, A. 2015: "Saw cuts on marble sarcophagi: New York and Ostia", in *ASMOSIA X*, 559-564.
- KOZELJ T. *et al.* 1985: "Sarcophages decouverts dans les carrières de Saliari (Thasos), in P. PENSABENE (ed.): *Marmi antichi: Problemi d'impiego, di restauro e d'identificazione* (Studi miscellanei, vol. 26), 75-81.
- VAN KEUREN F. *et al.* 2015: "Parian Lychnites and the Badminton Sarcophagus in New York", *ASMOSIA X*, 403-411.
- WARD PERKINS J., THROCKMORTON P. 1965: "The San Pietro Wreck," *Archaeology* 18, 3, 1965, 201-9.