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WOODEN AND LEADEN COFFINS FROM THE GRAECO-ROMAN BURIAL GROUND OF MARINA EL-ALAMEIN

Iwona Zych

The discovery *in situ* of a surprisingly well-preserved wooden coffin in Tomb 29, investigated archaeologically this year,¹⁾ gave impetus to a study that the author has been continuing on and off, as part of a broader interest in burial customs of the Graeco-Roman period in this part of Egypt, for as long as she has had the opportunity to participate in excavations of the burial ground of Marina el-Alamein on the northwest coast of Egypt.

Consequently, it has been deemed beneficial to provide this provisional account of the assemblage of wooden and leaden coffins,²⁾ as well as evidence of wooden biers, discovered over the years in particular tombs by an archaeological team directed by Prof. W. A. Daszewski from the Polish Center of Archaeology of Warsaw University and by inspectors from the Supreme Council of Antiquities of Egypt.

CIRCUMSTANCES OF THE FINDS

The coffins come from a cemetery lying on the fringes of the ancient harbor town located at the site of Marina el-Alamein. The small town, which appears to have been a prosperous coastal settlement, was founded already sometime in the 2nd century BC, but its heyday came from the first century BC onwards. Several of the

underground chamber tombs investigated in the central part of the cemetery that extends southwards and southwestwards of the town, date from the second half of the 1st century BC. Many of these served burial and memorial purposes for longer periods of time, extending even down into the 3rd century AD.³⁾ The coast in this region is

1) For an overall report on the results of the 2002 season at the site, cf. the contribution by W.A. Daszewski in this volume.

2) The season also brought the first of a kind discovery in Marina el-Alamein of a terracotta coffin, which is illustrated on p. 56 in this volume. Mention should be made as well of the use of large ceramic storage containers as coffins, e.g. child burial G14 on the outside of the south wall of the aboveground mausoleum of Tomb 6, (cf. W.A. Daszewski, *PAM XII, Reports 2000* (2001), 55) and an entire section of the cemetery concentrated in the neighborhood of the Christian basilica on the site.

3) For reports on excavations by the Polish Archaeological Mission in the ancient necropolis, see previous volumes of *PAM* I-IV, VI-XIII (1990-2002). A comprehensive discussion and dating was presented by the discoverer, W.A. Daszewski, in a paper read at the conference in Lyon, cf. id., "La nécropole de Marina el-Alamein", in: *Nécropoles et Pouvoir. Idéologies, pratiques et interprétations. Actes du colloque "Théories de la nécropole antique"*, Lyon 21-25 Janvier 1995, ed. S. Marchegay, N.-Th. Le Dinahet, J.-F. Salles (Lyon 1998), 229-241, and in another contribution presented at a conference in Rhodes (forthcoming).

composed of a Quaternary calcarenite bed, which is more or less covered with sand. The cemetery of the harbor town, which sits on low-lying ground around a picturesque lagoon, was situated on the rocky ridge running parallel to the coastline a few hundred meters to the south. The tombs rose in tiers on the northern slope of this ridge, taking advantage of the exposed bedrock for the situation of the underground chambers.

The specific temperature and humidity in these underground tombs, which were in effect sealed by encroaching sand, have occasionally created conditions conducive to the preservation of wood. Thus, well preserved planks and beams of wood have been discovered in some of the chambers, helping to identify the much more frequent, but much less material traces of wood, powdered beyond recognition. Such "smudges" of a reddish-brown color have been noted repeatedly in the burials made in the niches of underground tomb chambers (but apparently never in the "pillar" tombs or in isolated single burials), quite often in connection with copper nails

of various sizes. However, apart from recording the presence of wooden biers or coffins and noting their prevalence, little more could be said on this basis.

Preserved pieces of wooden coffin planks and structural members are found either *in situ* in the loculi or strewn across the sand fill of the chamber, if – as is commonly the case – the burials had been ravaged by robbers in antiquity. Except for the coffin from Tomb 29, which is the most complete example discovered to date, none of the other fragments permit a reasonable reconstruction of the form as a whole. Even so, certain ideas can be developed from an analysis of these finds.

Altogether, the assemblage consists of about 30 pieces of planks, beams and other structural members, originating from seven of the excavated underground chamber tombs. If the residual fluffy wood and finds of copper nails are also taken into consideration, it may be said that evidence of some kind of coffin or bier has been noted in approximately 30 cases of burials. This makes for about 10% of all the burials investigated to date at Marina el-Alamein.

WOODEN COFFINS AND BIERS

Most of the preserved pieces of wood represent the same general species. Pending examination by a specialist, it may be said that it is a fairly hard, brown wood with darker brown growth rings, frequently with knots. Palm wood was not in evidence at all.

The woodworking is proficient, occasionally even excellent. The outside faces can be very smooth, the inside are often worked only summarily. Evident tool marks (saw and burin traces have been recorded on the boards) need to be studied separately.

WOODEN COFFINS

The most common of the three methods of jointing boards observed in the assemblage is the use of wooden pegs fitted into holes made in the thickness of the boards. This construction technique is perfectly suited to the task of joining narrow boards to achieve the required width or height of the coffin body. Two of the fragments of long boards recorded have holes drilled in the opposite long edges (*Fig. 1*, top). The preserved length of one, over 80 cm, indicates that it must have been part of the length of the coffin. One of the boards is

12.3 cm wide, the other can be reconstructed as being about 30 cm wide. They had evidently been joined in the same plane to other boards on either side.

In the remaining cases, the maximum length of the boards with frequent peg holes, but only in one long side, is about 135 cm; the surviving width of these planks ranges from 10 to 30 cm. The widest of such boards is the wooden casing of one of the lead coffins (Tomb 23, loculus 7, cf. *Fig. 3*, bottom); it is 33 cm wide and has five holes surviving along one edge. Furthermore, there has never been an example of a peg hole made in the short edge of such a board. Obviously, these

boards should be interpreted as the sides of coffin bodies. They would have obviously been pegged into holes in the coffin bottoms (not one of which seems to have survived). The frequency of peg holes required for joining the sides to the bottom in these cases varies: three is a standard with one in the center of the long side and one each near each of the ends (e.g. coffins from loculus 3 and 6 in Tomb 29, *Fig. 2*). Occasionally, there is just one hole on a long board (cf. *Fig. 3*, center) and quite often several holes, spaced from 21.5-22 to 25 and 32 cm apart. The above mentioned outer wooden casing for a lead coffin has at least five closely spaced plug holes, presumably because of the heavy weight it was supposed to bear.

One example of a triangular piece of wood from the end of a coffin (from Tomb 29) has peg holes drilled vertically quite close to one another in both the sloping edges (cf. *Fig. 1*, bottom). The lid, of gabled form in this case, must have been fixed down with pegs. Surprisingly, this is the only form of joining that this piece displays. The lower edge was quite obviously not joined with the rest of the end board in this manner.

The peg holes are fairly uniform in size: the round ones are 0.8-1.1 cm across, the oblong or rectangular ones are bigger, typically 1.5 x 1.3 cm, 1.6 x 1.4. The depth of these holes, where preserved in full, is an average from 5 to 7 cm. In the majority of cases, the holes are made at right angles to the edge of the board, but two pieces of board (from a single loculi, so presumably from the same coffin) reveal jointing drilled at an angle of c. 45° to the edge (cf. *Fig. 1*, center).

Pegs have been found separately, some even still *in situ* in the holes. It was noted on several occasions that the peg itself, made of a hard and sturdy wood, slightly

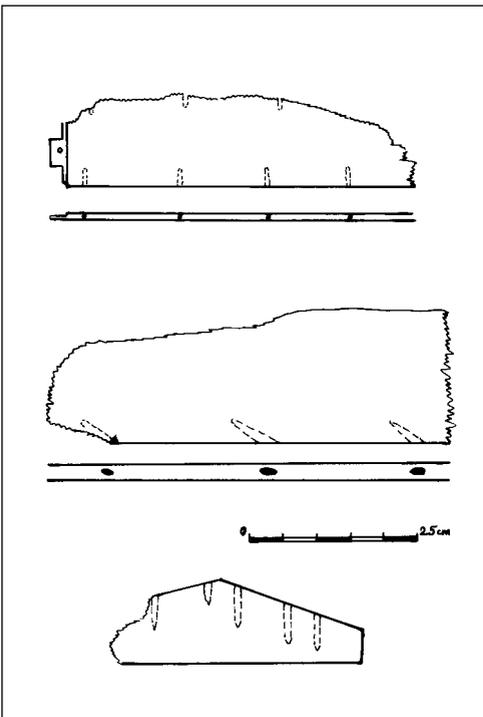


Fig. 1. Three examples of planks with evidence of jointing using wooden pegs. Plank from Tomb 28 (top), plank from Tomb 23, loculus 2 (center); triangular piece from Tomb 29 (bottom) (Drawing I. Zych)

tapering in form, was stuck in some kind of fluffy-wood matter that filled the slightly bigger hole. This could be interpreted as evidence of the use of some sort of additional peg, perhaps even soaked for a better fit, which could account for the dramatically different state of preservation.

Quite seldom small holes are drilled through the thickness of the boards, usually at the same height, and relatively close to the short edges (cf. *Fig. 2*). These holes may be evidence of upright supports being fixed to the sides of the coffin closer to the short ends.

In two cases one can assume there is evidence of simple mitre-jointing.

The peg technique was combined with dove-tail jointing of the corners in at least two coffins found in Marina. The coffin

discovered this year in Tomb 29 exemplifies this technique. The sides are 179.5-180 cm long, and about 29 cm high. The end board made of two pieces of wood had a combined height of 29 cm and was 49.8 cm wide at the bottom, narrowing slightly to 48.5 cm at the top (*Figs. 4a,b*). The other end board (the preserved piece is probably from the bottom) was 49.5 cm wide. A similar piece of end board from the foot of a coffin was discovered in the south chamber of Tomb 28 (loculus 11); it was 42.5 cm wide, the surviving height being 12.5 cm. The thickness of the long boards is a uniform 2.2-2.4 cm; the end board is 2.7 cm thick. They display another feature of the dove-tailing technique which is the inside thinning of the sides at the edges for a better fit at the corners (the boards are

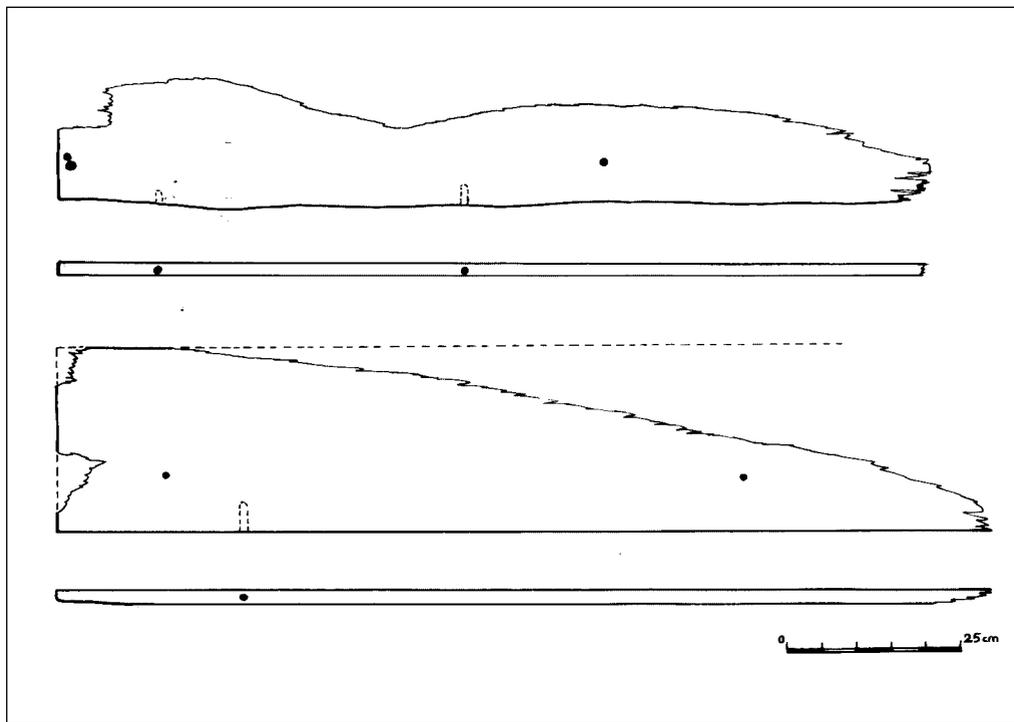


Fig. 2. The long boards from a coffin found in loculus 6 of Tomb 29 (Drawing I. Zych)

thinned to 1.6 cm as a rule). The surviving top edge of the end board is absolutely plain. The top edge of one of the long sides is only fairly preserved (the other is damaged), but there is a hint of a cut in the middle of this side to accommodate a cross-wise member possibly of structural purpose. No trace of the bottom has survived, but since the two burials found in this coffin appear to be in anatomical order,⁴⁾ it must have simply disintegrated.

The triangular piece described above may have been connected with this coffin, but there is no direct evidence. An intriguing feature is the small *delta* sign (1.5 cm to the side), carved into the top one of the end boards (cf. *Fig. 4a,b*). It has been assumed at present that this is a carpenter's mark, but other interpretations are surely possible as well.

A third construction technique was evidenced by the assemblage of wooden

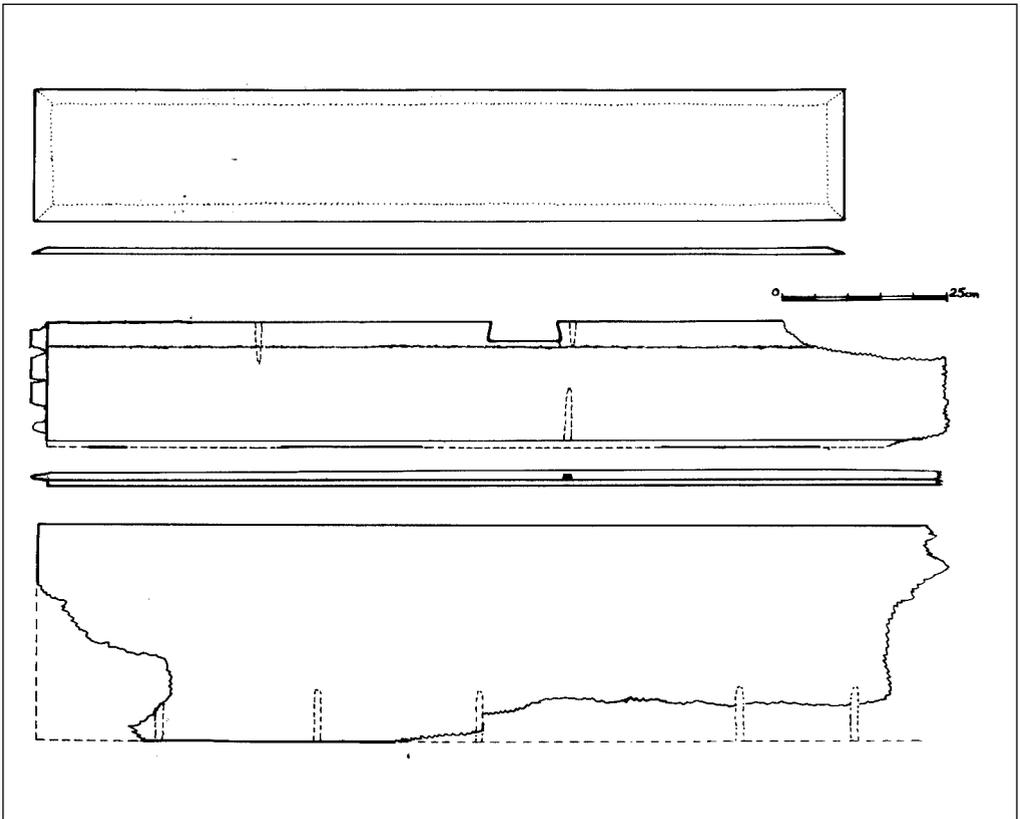


Fig. 3. Long boards from wooden coffins representing three different jointing techniques: a panel board from Tomb 24 (top); tongue-in-groove board from Tomb 22 (center); board with holes for wooden pegs in bottom edge from Tomb 23, loculus 7 (bottom) (Drawing I. Zych)

4) The bodies were laid in the coffin with heads facing in opposite directions. An interesting parallel is provided by a burial in a lead coffin discovered in Jerusalem, cf. Rahmani, *op. cit.*, 105, no. 63. Two men of non-Mediterranean stock, one 35 years old, the other 25, had been buried together, heads in opposing directions.

coffin pieces from Tombs 22 and 24⁵⁾ It is a tongue-in-groove form of woodworking. Characteristically for this method of jointing, the boards, which act like panels inserted into a frame, have the edges of the outside face pared down (cf. *Fig. 3*, top). A board preserved in two pieces from Tomb 24 is 123 cm long and 20 cm wide. It is thinner than usual, only 0.95 cm, and the edges are further thinned to just 0.7 cm thickness. Other panels from this and the

other tomb follow the same principle. The panel from Tomb 22 is wider – 36 cm, and its surviving length is 80 cm. These panels were fitted into grooves in upright members and additionally fixed in place with some kind of presumably organic adhesive (whitish staining on the inside of the boards streaking away from the edges). Examples of such upright members have been discovered, one in Tomb 22 and the other in Tomb 24.⁶⁾ One is squarish, 5.7 cm

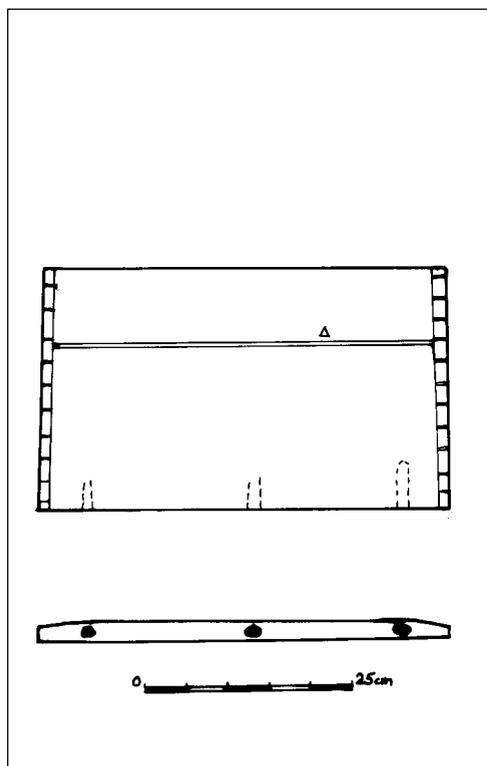


Fig. 4a. Wooden coffin end board with dove-tail jointing from Tomb 29, loculus 3 (Drawing I. Zych)



Fig. 4b. Wooden coffin in situ in Tomb 29, loculus 3, showing dove-tail jointing (Photo W.A. Daszewski)

5) The present author has no means of knowing whether the pieces of wood, which were lying more or less together in each of the tombs, had not been moved during the rescue excavation of these tombs by Egyptian antiquities inspectors in the mid 1990s. However, the character of these remains is strongly suggestive of a single coffin in each of the cases.

6) A similar beam was also found, charred at one end, apparently discarded by a robber in the chamber of Tomb 6; obviously such pieces were excellent material for reuse as torches!

to the side and at least 63 cm long, the other is rectangular, 9 x 6.3 cm, and at least 56 cm long. (Fig. 5). Both have grooves c. 0.6-0.7 cm wide cut into the length in such a way that the panels fitted into the grooves would have formed a flush surface with the member with only slight articulation at the edges. The inside corner was planed down. These upright members may have been longer than the coffin body, in order to form supports, like furniture legs.

The long side panels described above also had to be fitted in some grooved member along the long edges and such

pieces of wood with a groove along the long edge have been found. These pieces are fitted with tongues at the shorter ends, again to facilitate their fixing into the groove of a structural upright member. One example of such a board (from Tomb 24, cf. Figs. 5, bottom; 6, top right) is 2.6 cm thick (including the groove of 0.8 cm width) and 10 cm wide. The preserved length is 50 cm. The tongue flange is 2.5 cm long.

An interesting piece for the analysis of the tongue-and-groove technique for coffin construction is a preserved side board from Tomb 22 (Figs. 3, center; 7, bottom). It is 139 cm long and 17-18 cm wide. Preserved at one short edge is a tongue 2.5 cm wide. A half-lap joint at the bottom edge and a single peg hole indicate that this long board was joined at right angles to another board along the long side. The other long edge has two peg holes added to a trapezoidal cut, which was presumably intended to house a cross-member reinforcing the coffin structurally at this point.

Interestingly, the coffin remains from Tombs 22 and 24 bear evidence of decoration. While the blackened (bitumized?) inside face of the long panel board from Tomb 24 may or may not be evidence of a ground laid under a painting layer, the upright member from Tomb 22 clearly bears a lengthwise black band and some red and black dots (?). A black band also seems to have run along the length of the long board from Tomb 22. Unfortunately, no interpretation of the character of this decoration can be hazarded due to the poor state of preservation.⁷⁾

WOODEN BIERS

The presence of biers in a number of burials in the cemetery of Marina el-

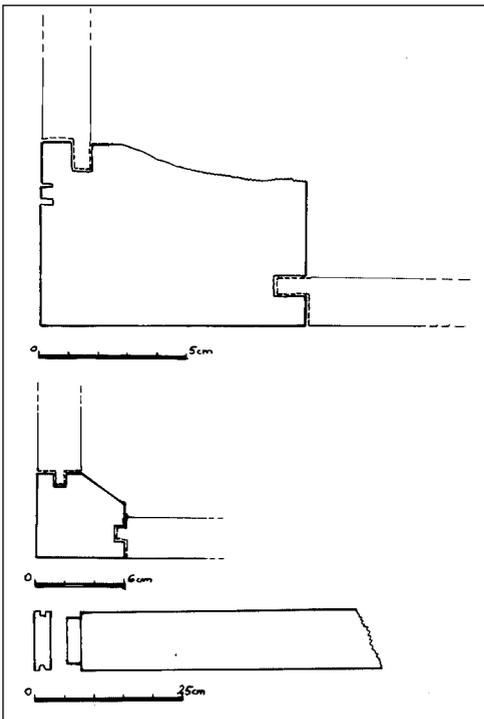
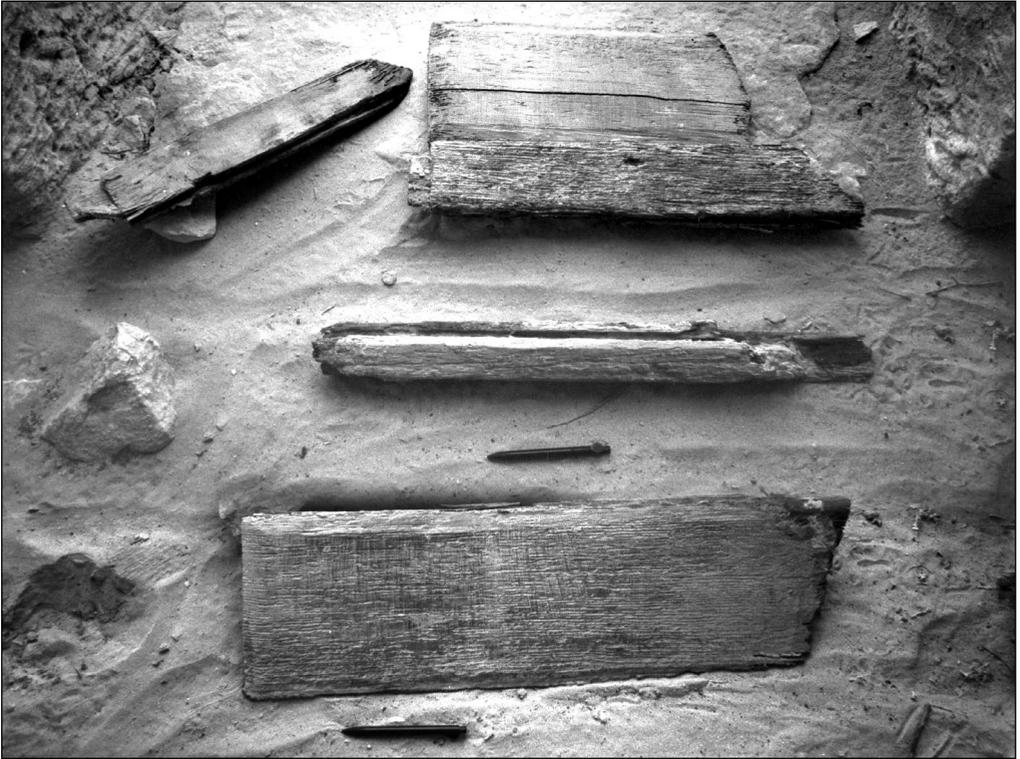


Fig. 5. Upright beams from a wooden coffin, from Tomb 22 (top) and from Tomb 24 (center), and a plank with tongue and side grooves from Tomb 24 (Drawing I. Zych)

7) For examples of painted wooden coffins in a variety of techniques from approximately the same or earlier times, cf. C.C. Edgar, *Graeco-Egyptian Coffins, Masks and Portraits*, CGA (Cairo 1905), nos. 33101-33285.



*Fig. 6. Planks and beams from wooden coffins found in Tomb 24
(Photo I. Zych)*



*Fig. 7. Planks from wooden coffins found in Tomb 22
(Photo I. Zych)*

Alamein has been suggested on the evidence of fluffy-wood remains and scatter of copper nails. The “smudges” of powdered wood that can be discerned at the moment of discovery usually appear across the skull, across the legs and lengthwise along the body. In one case (Tomb 28, south chamber, loculus 8), the wood of a long side board had disintegrated completely, leaving only its “negative” visible in cross-section in the sand. Exceptionally, the image of the wooden underboard was observed in loculus 2 of Tomb 29 – a thin layer of disintegrated organic matter forming a rectangular outline under and around an articulated skeleton. As one long board and the end board were preserved here in slightly better condition, it could be hazarded that this darkened film of sand was indeed a reflection of the bottom of the coffin.

A striking example of a non-existent bier was examined in loculus 12 of Tomb 23 (Fig. 8). Six huge iron nails were observed undisturbed, sticking up at regular intervals on either side of two fairly well articulated skeletons lying side by side. The nails formed two rows, about 45-50 cm apart, the intervals between them being c. 80 cm. Upon close examination of the nails, it was noted that the corrosion of the metal had kept in place fragments of the wood that had otherwise disintegrated entirely. It turned out that each of the nails had been driven through two beams of wood crossing at right angles. The bottom beam was about 3 cm thick and ran crosswise, the top beam was thicker, c. 5 cm, and extended lengthwise. The nails had been driven in from the bottom and at the top their tips had been hammered down into the wood, all facing inward.



Fig. 8. *The burial in loculus 12 in Tomb 23; arrows indicate the location of four out of six huge nails, once presumably part of the bier (Photo W.A. Daszewski)*

LEAD COFFINS

To date, the Roman-period cemetery at Marina el-Alamein has yielded three examples of lead coffins. The coffins represent two different types.

The first coffin was discovered in 1990 in the underground chamber tomb T1GH explored by the Polish team.⁸⁾ Two other examples came to light during Egyptian rescue excavations carried out in the mid-1990s in an accidentally uncovered chamber tomb some 170 m to the southeast of T1GH (Tomb 23). Both tombs appear to be from the same general period, the complex discovered earlier being dated fairly securely on archaeological grounds to the second half (or end) of the 1st century BC through the middle of the 1st century AD.⁹⁾

The burials had all been disturbed in antiquity. They contained (in two cases) single skeletal burials of adults buried in rectangular lidded coffins. In T1GH, anthropological examinations revealed the skeleton to be that of a male 45-55 years of age, lying supine with hands resting on the pelvis. Next to the skull, in the right-hand corner of the coffin, there was a handful of charred seeds placed there presumably in offering. The third coffin, which was of a different shape and made in a different technique, contained bones in no apparent

order, clearly representing more than one adult. Either secondary interment had been the case here or else this would be the only reported example of *ossilegium*.¹⁰⁾

The two rectangular coffins fall into the category of a burial container, either plain or ornamented, that is well known from all over the ancient world, from Britain in the West to the Levantine coast in the East.¹¹⁾ The body of these two coffins was made of lead sheet, 2-3 mm thick in one case (T1GH, *Fig. 9*) and 4-5 mm in the other (Tomb 23, *loculus 6*). The first one was smaller, being 183 cm long, 34-42 cm wide (broadening toward the head) and 24 cm high. The latter was 193 cm long, about 41 cm wide at the head and possibly narrower at the foot end, and 23 cm high. The method of construction of the coffin from T1GH represented Toller's type 3, that is, the bottom and long sides were hammered into shape from a single piece of sheet and the head plates were added on by means of hammering.¹²⁾ A separate piece of lead sheet was used for the lid, the sides of which were turned down to fit the body. The head sheets had the top edge folded down and hammered, while the long edges were simply flattened on top. The same can be said of the finishing of the edges of the

8) For a description of the circumstances of the find, cf. W.A. Daszewski, *PAM II, Reports 1989-1990* (1991), 34-35.

9) *Loc.cit.*

10) Rahmani, *op. cit.*, 10, notes that all the known lead coffins from Britain contained only a single burial, while in the East there were a few examples of double superimposed interments, either in the same or opposite directions, and a single case of four bodies being buried in a coffin from Jerusalem.

11) Around 250 coffins from Roman and Byzantine times are known from the Eastern Mediterranean; most of these were ornamented, but they were occasionally accompanied by plain ones, cf. L. Y. Rahmani, *A Catalogue of Roman and Byzantine Lead Coffins from Israel* (Jerusalem 1999), 10, and extensive discussion and bibliography. Some plain lead coffins from Syria were mentioned by M. Chéhab, "Sarcophages en plomb du Musée National Libanais", *Syria* 16 (1935), 66. Of the 238 lead coffins listed for the British Isles in Roman times, 74 are known to be plain, cf. H. Toller, *Roman Lead Coffins and Ossuaria in Britain*, *British Archaeological Reports* 38 (Oxford 1977), 19, 74. Similar undecorated lead coffins are known from the ancient necropolis of Hadra in Alexandria, cf. Daszewski, *PAM II, op. cit.*, 35.

12) Toller, *op. cit.*, 10-12 and *Fig. 2*, see also key on pp. 49-50. This type is the second most frequently used on coffins from the British Isles (about 13% of the coffin sample).



*Fig. 9. Lead coffin from Tomb 1GH
(Photo W.A. Daszewski)*



*Fig. 10. Oblong lead coffin with fragments of the wooden casing viewed in situ in a loculus in
Tomb 23 (Photo I. Zych)*

other coffin. In the latter case soldering of the joints is also in evidence. A discoloration along the top edge of the coffin body (1.5 m wide) may be evidence of the lid being secured with some sort of fixing substance. The bottom of this coffin was turned up gently at the sides and a layer of mineral filling (possibly lime) was in evidence at the bottom.¹³⁾ The lid in the case of the coffin from Tomb 23 has not survived.

The other lead coffin from Tomb 23 (loculus 7) represented a generally oblong shape. It was about 195 to 200 cm long, about 54-55 cm wide, the sides from 28 to 33 cm high. The thickness of the sheet used for the sides was 4-5 mm, while the bottom appeared to be thicker (even 10 mm). At either end the long sides were

bent inwards and soldered together to form the coffin ends. There was a single joint with 2 cm overlap at either end. Squeezed between the lead container and the walls of the loculus on either long side were pieces of wood, which must have belonged to the outer coffin (*Fig. 10*). Such wooden casings, while rare in the Eastern Mediterranean, appear to have been quite common in Britain.¹⁴⁾ An interesting feature of this burial, apart from the tight fit, is what appears to be a small pit sunk into the rock floor of the loculus near the back of it. Unfortunately, it could not be explored under the present conditions. No such pit has ever been found yet in any of the loculi investigated to date in the necropolis of Marina el-Alamein.¹⁵⁾

13) A mineral filling, either lime or gypsum, has been noted in some lead coffins from the British Isles, cf. Toller, op. cit., 14, 16. This substance remains to be interpreted convincingly.

14) Rahmani, op. cit., 12; Toller, op. cit., 1-2, 6.

15) Some of the research for this report was done during a stay in London in 2002 under a grant from the Lanckoroński Foundation in Cracow, for which I am very grateful.