

6 – THE MAUSOLEA OF HALICARNASSUS

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The Mausoleum at Halicarnassus was built for Mausolus, Satrap of Caria, who died in 353/2 BC, as the grandest tomb the Greek world had ever seen. Grand indeed it seemed to Roman writers, including Pliny¹ and Vitruvius.² The description of the building to be found in Pliny's *Natural History* is especially important for an understanding of its possible appearance. Pliny was working from earlier, Greek texts copied and recopied by hand. Pliny's text itself comes down to us in many Latin manuscripts, which do not all agree.³ It is easy therefore to see how errors could creep in and, although some of his 'facts' can be reconciled with the archaeological evidence, not all that he says can be confirmed.

Scopas had as his rivals and contemporaries Bryaxis, Timotheus and Leochares, whom we must discuss together, because they jointly carved the sculptures of the Mausoleum. This is the tomb built by his wife Artemisia for Mausolus, king of Caria, who died in the second year of the 107th Olympiad. These artists in particular were responsible for making the building one of the seven wonders of the world. It is 63 feet long on the north and south sides, shorter on the façades, its total circumference is 440 feet, it rises to a height of 25 cubits, and is surrounded by 36 columns. They called the circumference a 'colonnade'. The sculptures on the east side were carved by Scopas, those on the north by Bryaxis, those on the south by Timotheus, and those on the west by Leochares; and before they finished the queen died. But they did not stop the work until it was completed, considering it to be a monument to their own glory and artistic skill; and to this day their hands compete with one another. A fifth artist took part. For above the colonnade is a pyramid, equal in height to the lower part, contracting by 24 steps to the topmost point; on the summit is a marble four-horse chariot, made by Pythis. When this is included it brings the whole building to a height of 140 feet. (Trans. Waywell).

¹ Pliny *NH* 36.4.30-31.

² Vitruvius 2.8.11-12 and *Preface* to Book 7, chapters 12 and 13.

³ S. Hornblower, *Mausolus* (Oxford 1982) 225; G. B. Waywell, *The free-standing sculptures of the Mausoleum at Halicarnassus in the British Museum: a catalogue* (London 1978) 54-55; K. Jeppesen and A. Luttrell, *The Maussolleion at Halikarnassos 2: The written sources and their archaeological background* (Moesgaard 1986) 13-51; G. B. Waywell, 'The Mausoleum at Halicarnassus', in *The Seven Wonders of the ancient world*, ed. P. Clayton and M. Price (London/New York 1988) 100-23 (103); K. Jeppesen, 'Das Maussolleion von Halikarnass. Forschungsbericht 1997', *Proceedings of the Danish Institute at Athens* 2 (1998) 161-231 (164-67); K. Jeppesen, *The Maussolleion at Halikarnassos 5: The superstructure, a comparative analysis of the architectural, sculptural and literary evidence* (Moesgaard 2002) 29-42.

Before Charles Newton's excavations of the Mausoleum site in 1856-57⁴ there was no archaeological evidence to restrain the many and fantastic attempts at its reconstruction.⁵ Even following the excavations, suggested solutions to the problem of reconstruction can seem fanciful. One of the problems intrinsic to the task is not knowing the ancient foot length used on the Mausoleum. The Greeks had no standard system of measurement, such as we use today, and their foot and indeed other units of measurement could vary from time to time and place to place.⁶ Moreover, where Pliny writing in the first century AD gives measurements in feet, he is not thinking of a measurement known to Romans of his day (usually 29.57cm), but is quoting Greek sources that go back to the Mausoleum architects' own treatise on their building. We can only guess at what foot measurement they had in mind. That guess tends to depend on one of two approaches: the first may be characterised as the 'tell it like it is' approach; and the second as the 'tell it like it ought to be'. The leading exponent of the first has been Kristian Jeppesen, who from 1966 to 1977 led the Danish excavations at the site of the Mausoleum. He found that 30cm, or more precisely 29.90cm, often recurs among the architectural members and has argued that this may have been the Mausoleum foot.⁷ He is also open, however, to the alternative suggestion that the key measurement used in the actual construction may not have been the foot but a lesser unit of daktyls, where one daktyl is the equivalent of two centimetres. The recurring 30cm unit in this case would be the equivalent of 15 daktyls in a system where 16 daktyls make a foot, and a foot is the equivalent of 32 and not 30cm. This daktyl-based unit is preferred by Poul Pedersen in conclusions he draws from an analysis of the Mausoleum terrace and its entrance propylon.⁸ Recently, Jeppesen has concluded with Pedersen that the foot unit was indeed 32cm.⁹

Wolfram Hoepfner has put forward an alternative foot of 0.3008m, which he equates with the planning unit.¹⁰ This fits with his reconstruction which is arrived at by a different method from the more empirical attempt of Jeppesen. Hoepfner's starting point is the text of Pliny, which he combines with a theoretical system of proportions to arrive at a pleasing but, Jeppesen claims, largely hypothetical Mausoleum. Hoepfner's method has much in common with an earlier attempt by Fritz Krischen.¹¹ Jeppesen has been critical of both scholars'

⁴ C. Newton, *A history of discoveries at Halicarnassus, Cnidus and Branchidae* (London 1862) 72-212.

⁵ J. van Breen, *Het Reconstructieplan voor het Mausoleum te Halikarnassos* (Amsterdam 1941) 44-117; J. Bury, 'Chapter III of the Hypnerotomachia Poliphili and the tomb of Mausolus', *Word and image* 14 (1998) 40-60 (49, fig. 12).

⁶ O. Dilke, *Mathematics and measurement* (London 1987) 26; cf. F. Cooper, *The temple of Apollo Bassitas I* (Princeton 1996) 131-32 with bibliography.

⁷ K. Jeppesen and J. Zahle, 'Investigations on the site of the Mausoleum 1970/1973', *AJA* 79 (1975) 67-79 (78); Jeppesen, 'Das Maussolleion' (n. 3 above) 163, 187-96.

⁸ P. Pedersen, *Maussolleion at Halikarnassos 3.1: The Maussolleion terrace and accessory sculptures* (Moesgaard 1991) 93-94.

⁹ Jeppesen, *Maussolleion* (n. 3 above) 43-54.

¹⁰ W. Hoepfner, 'Zum Maussolleion von Halikarnassos', *AA* (1996) 95-114 (98).

¹¹ F. Krischen, *Weltwunder der Baukunst in Babylonien und Jonien* (Tübingen 1956) 96-101.

work, describing Hoepfner's as a 'house of cards'. Given such disagreement among the main interpreters, the fragmentary nature of the material evidence and the high degree of specialist knowledge needed to interpret it, there is no easy way to represent here any one reconstruction as a consensus of the way the Mausoleum looked. The best way to proceed, therefore, is to summarise the arguments of the three most recent attempts at reconstruction and to present them side by side (Fig. 6.1).

Waywell's Mausoleum

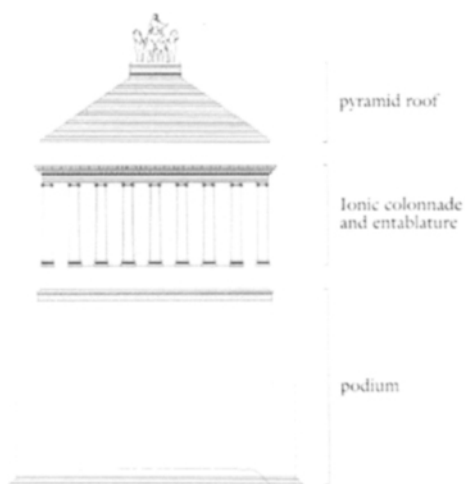
In 1978 Professor Geoffrey Waywell published his catalogue of the freestanding sculptures from the Mausoleum. Like Newton, he concluded that the human groups should be divided into three separate scales – colossal, so-called heroic and life size – indicated not least by the surviving fragments of feet. The colossal includes human standing figures (c. 2.70-3.00m high: Fig. 6.2), hunt scenes and scenes of sacrifice. The heroic scale comprised standing figures (c. 2.40m high) in either Greco-Carian or Persian dress (Fig. 6.3). The life size figures (c. 1.80m high) comprise repeating groups of battle between Greeks and Persians (Fig. 6.4). Added to these are the fragments of the colossal chariot group (Fig. 6.5), which Pliny says crowned the roof, and a series of lions (Fig. 6.6) which Waywell arranges in two files around the base of the roof.

Starting with this sculpture, Waywell combined its evidence with Pliny's testimony, the best of Newton's original findings and preliminary reports of Jeppesen's excavations at the Mausoleum site, to arrive at a summary reconstruction of the monument. This was described and illustrated in outline drawings in his 1978 catalogue.¹² Afterwards, Waywell worked with the graphic artist Susan Bird to produce an image published in 1989 of one of the short sides of the Mausoleum showing greater sculptural detail.¹³ Taking Pliny's descriptive account at face value, Waywell calculated that the likeliest case is a 140 foot high building, rectangular in plan and measuring 440 feet in circumference. He included in the height the chariot group crowning the pyramidal roof. Pliny awkwardly says that the building rose to a height of 25 cubits (37.5 feet), but then goes on to say that the overall height was 140 feet. Waywell concluded that for the lesser measurement Pliny had in mind the height of one of the three parts – podium, colonnade (pteron) or pyramid roof – and the likeliest is the pteron. Pliny says that this had thirty-six columns. The distance between the centre of one column and another, the inter-axial measurement, has long been calculated as 3.00 m,¹⁴ and this was confirmed by Jeppesen's discovery of a beam from the Mausoleum, which the Crusader Knights had built into their castle. The traditional arrangement of columns consistent with the rectangular shape of the building, suggested by the foundation cutting, is eleven along the long sides and nine on the short. Such an arrangement would give a stylobate measuring 32 x 26m.

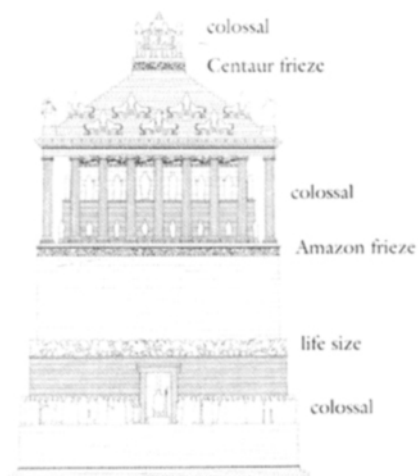
¹² Waywell, *Free-standing* (n. 3 above) 54-66.

¹³ Waywell, 'The Mausoleum at Halicarnassus' (n. 3 above) 119, fig. 61.

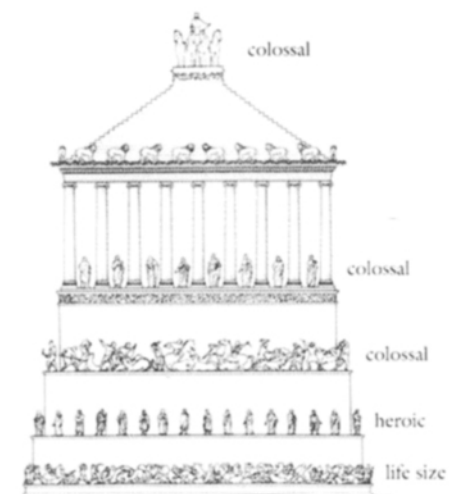
¹⁴ W. Lethaby, *Greek buildings represented by fragments in the British Museum* (London 1908) 43.



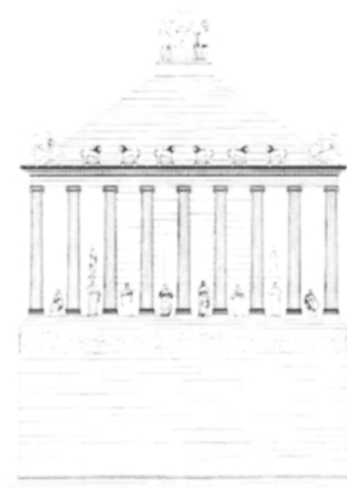
Sketch of the Mausoleum showing the basic known elements



The Mausoleum according to K. Jeppesen



The Mausoleum according to Geoffrey Waywell



The Mausoleum according to W. Hoepfner

Figure 6.1 Reconstructions of the Mausoleum. Courtesy The British Museum.



Figure 6.2 Colossal portrait statues, perhaps to be identified as Mausolus and Artemisia. Courtesy The British Museum.



Figure 6.3 'Heroic' head, on a scale between colossal and life size.



Figure 6.4 Lifesize head of Persian. Courtesy The British Museum.



Figure 6.5 Colossal horse from chariot group. Courtesy The British Museum.

Figure 6.6 Marble lion. Courtesy The British Museum.

The stylobate was both the base of the colonnade and the top of the podium. As for the base of the podium, Newton measured 127 x 108 feet for the foundation cutting, using a modern foot measurement of 30.48cm. This translates as *c.* 38.71 x 32.92m. Jeppesen measured the cutting in different places as 38.15 – 38.40 x 32.50 – 32.75m.¹⁵ Both Newton's and Jeppesen's measurements are roughly consistent with the 120 x 100 feet suggested by Pliny's given circumference, whatever the precise foot measurement was that he had in mind. If we were to superimpose the plan of the stylobate over the plan of the larger 'footprint' of the monument, as represented by the foundation cutting, we would readily see that the sides of the podium must have sloped or been stepped out so as to accommodate the difference. Waywell, always mindful of places to locate the sculpture, opts for three steps, providing three shallow shelves on which to set the three sizes of figure. Colossal figures were also placed between the columns of the pteron in a manner reminiscent of the freestanding sculptures of the Lycian Nereid Monument. Waywell has since modified his argument to suggest that the slightly smaller colossal female figures were located between the columns, while the male figures were placed on the upper of the podium shelves.¹⁶

¹⁵ Jeppesen and Zahle 'Investigations' (n. 7 above) 75, n.31

¹⁶ G. B. Waywell, 'Further thoughts on the placing and interpretation of the freestanding sculptures from the Mausoleum', in *Architecture and society in Hekatomnid Caria*, ed. T. Linders and P. Hellström (Uppsala 1989) 23-30 (29).

The strength of Waywell's reconstruction is its simplicity and visual coherence. He is at pains to find balance between the parts and the whole. All commentators agree that the Mausoleum sculpture is an integrated part of the design, but more than any other, Waywell takes the sculpture as primary evidence for reconstructing the architecture, and indeed sees the monument as a forum for displaying the sculpture. There are, however, unresolved objections to his reconstruction raised by Jeppesen.

Jeppesen's Mausoleum

Jeppesen's fascination for the Mausoleum has occupied much of his working life. He, more than any other scholar, has devoted his research to pursuing every last scrap of evidence for understanding the monument and has recorded his findings in numerous publications. Together with his Danish colleagues he has created a site museum of all the fragments of architecture and sculpture discovered in his excavations. Perhaps the most sensational discovery of these excavations was the sacrificial burial deposit, which had been overlooked by Newton's expedition.¹⁷

Inevitably, in the course of his researches Jeppesen has more than once changed his mind about the conclusions that can be drawn from his findings. His eventual reconstruction shares features in common with Waywell's but there are also significant differences.¹⁸ One major difference is in the reading of Pliny's text. Waywell accepts the figure of 25 cubits (37.5 feet) as that intended by Pliny and applies it to the height of the colonnade. Jeppesen, however, rejects this figure and argues instead that it should have read 75 cubits (112.5 feet). This he sees as the height of the podium and the colonnade together. The height of the roof must, therefore, be 27.5 feet (140 minus 112.5), a figure Jeppesen finds compatible with the archaeological remains.¹⁹ He reconstructs the height of the monument as follows:²⁰

Podium and colonnade measured to the lowest pyramid step (75 cubits)	112.5 feet
24 pyramid steps	22.5 feet
Height of the quadriga pedestal only	5.0 feet
Total	140.0 feet

Other major differences between Waywell's and Jeppesen's reconstructions are to be found in the deployment of the sculptured remains. According to Jeppesen, a blue limestone shelf ran around the wall of the cella on which colossal portrait statues of the

¹⁷ K. Jeppesen, F.Højlund and K. Aaris-Sørensen, *Maussolleion at Halikarnassos 1: The Sacrificial Deposit* (Copenhagen 1981).

¹⁸ K. Jeppesen, 'Tot operum opus: Ergebnisse der dänischen Forschungen zum Maussolleion von Halikarnassos', *JDAI* 107 (1992) 59-102. See also K. Jeppesen, 'The Mausoleum at Halicarnassus, sculptural decoration and architectural background', in *Sculptors and sculpture of Caria and the Dodecanese*, ed. I. Jenkins and G. B. Waywell (London 1997) 42-48; Jeppesen, 'Das Maussolleion' (n. 3 above) and Jeppesen, *Maussolleion* (n. 3 above) 15-18.

¹⁹ Jeppesen, *Maussolleion* (n. 3 above) 38.

²⁰ Jeppesen, *Maussolleion* (n. 3 above) 207.

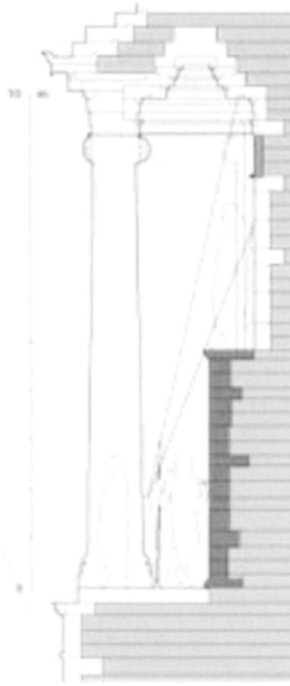


Figure 6.7 Proposed reconstruction of blue limestone shelf along cella wall.
After K. Jeppesen.

dynastic family and their ancestors were displayed (Figure 6.7). Here he assigns the work of the famous sculptors named by Pliny. Jeppesen suggests that the pteron could be reached by a staircase rising inside the monument.²¹ He believes that one statue was placed behind each intercolumniation, six on each short and eight on each long side, numbering twenty-eight in all. These he believes were the colossal male figures, of which the so-called Mausolus is the best preserved. Paired with the male statues were females, represented in the surviving fragments by a head which is slightly larger in scale than that of the so-called Artemisia.²² The smaller female statues of the 'Artemisia' type he believes are too small to have stood here, and these he assigns to the spaces between the columns, as he does a presumed series of bodyguard figures in Persian dress.²³

²¹ Jeppesen, 'Das Maussolleion' (n. 3 above) 161.1, 162.5, 164-82, 185 fig. 15.

²² BM Sc.1053; Waywell, *Free-standing* (n. 3 above) 108, cat. 32, pl. 17; Jeppesen, 'Das Maussolleion' (n. 3 above) 169, Erstens; Jeppesen, *Maussolleion* (n. 3 above) 178-82.

²³ BM Sc. 1001; Waywell, *Free-standing* (n. 3 above) 103, cat. 27, pl. 13 (Artemisia). BM Sc.1048; Waywell, *Free-standing* (n. 3 above) 113-14, cat. 42, pl. 19 (Persian warrior); Jeppesen, 'Das Maussolleion' (n. 3 above) 162.5, 169 zweitens and 170 drittens, fig. 3; Jeppesen, *Maussolleion* (n. 3 above) 147. For a sceptical view of the significance of the differences in scale, see P. Higgs, 'A newly found fragment of free-standing sculpture from the Mausoleum at Halicarnassus', in Jenkins and Waywell, *Sculptors* (n. 18 above) 30-33 (31-32).

As we have already seen, it was Jeppesen who found confirmation that the inter-axial measurement of the columns was 3.00m. Now, however, he argues that it was only so on the short sides, while on the long sides it was 2.88m.²⁴ These modifications represent a significant refinement of Jeppesen's own original confirmation that the inter-axial measurement was 3.00m. In other respects the Mausoleum appears to be a regular building planned along the lines of a grid, in which, for example, a single carved ceiling coffer,²⁵ and its framing, was roughly square and occupied one space between the columns. It might have been expected that these intercolumniations remained the same, but in Jeppesen's reconstruction this is not the case.

Jeppesen accommodates the remainder of Waywell's colossal and life-size sculpture on just two shelves around the podium. Jeppesen insists on only two shelves in the podium, where Waywell had three, because his calculation of the available space will not allow more. The space Waywell would assign to a third shelf is given over to a series of foot mouldings at the base of the podium, a three-stepped krepidoma rising on a euthynteria.²⁶ The life-sized sculptures Jeppesen sets in shallow recesses cut into the cornice of an entire band of blue limestone masonry running around the podium face.²⁷ This use of blue limestone, as a contrast with the white marble used elsewhere in the monument, is a striking feature of Jeppesen's reconstruction. (It includes the blue, square plinths beneath the circular column-pedestals). Jeppesen conjectures a further, lower shelf on which stood an estimated more than 120 colossal figures. These include a seated statue (Fig. 6.8), which has been seen as a representation of Mausolus, with one arm raised and resting on a spear or sceptre. When found, Newton records that the drapery was coated in purple paint, which discoloured to a rusty brown on exposure to the air. Jeppesen sets the figure in a niche in the form of a false door, let into the podium as a recess, and he reconstructs the remainder of sculpture set on the same shelf as a procession leading sacrificial victims in honour of the deified Mausolus.²⁸

The contention that there were just two sculpture shelves on the podium leaves no place for figures of the larger than life, so-called 'heroic' scale, which Jeppesen assigns to the steps of the roof along with the lions.²⁹ Also at roof level, Jeppesen attempts to identify the acroterial statues that stood at the corners of the entablature. It is suggested

²⁴ Jeppesen, 'Tot operum' (n. 18 above) 88-90; Jeppesen, 'Das Maussolleion' (n. 3 above) 161-202 (187); Jeppesen, *Maussolleion* (n. 3 above) 77-87.

²⁵ Jeppesen, *Maussolleion* (n. 3 above) 77-94

²⁶ Jeppesen, 'The Mausoleum' (n. 18 above) 45; Jeppesen, 'Das Maussolleion' (n. 3 above) 192.2; Jeppesen, *Maussolleion* (n. 3 above) 200-201.

²⁷ Jeppesen 'Das Maussolleion' (n. 3 above) 161.1, 185, fig. 15; Jeppesen, *Maussolleion* (n. 3 above) 155-63.

²⁸ BM Sc.1047; Waywell, *Free-standing* (n. 3 above) 108-10, cat. 33, pl. 17; Jeppesen, *Maussolleion* (n. 3 above) 194-99.

²⁹ BM Sc. 1049; Waywell, *Free-standing* (n. 3 above) 115, cat. 44, pl. 19 (heroic scale standing male). Jeppesen 'Das Maussolleion' (n. 3 above) 170-71; Jeppesen, *Maussolleion* (n. 3 above) 118-24.



Figure 6.8 Colossal seated figure, possibly of Mausolus himself. Courtesy The British Museum.
Figure 6.9 Over life-size head, possibly of Apollo. Courtesy The British Museum.

that at least two of the four bases were filled with representations of the goddess Leto and her son Apollo, slaying Niobe and her children. A fine head of Apollo (Fig. 6.9) and an assumed head of Leto are assigned to a putative acroterial group.³⁰

One aspect of the decoration of the Mausoleum on which Waywell and Jeppesen agree is the location of the Amazon frieze around the upper edge of the podium (Fig. 6.10). Jeppesen has shown beyond doubt that this frieze was mounted here and crowned by an egg and dart moulding, of which fragments survive.³¹ The Amazon frieze was just one of three ornamental friezes, and there were besides roughly square, carved coffer 'lids' in low relief.³² All these sculptures are the subject of a special study by Brian Cook and he is in agreement with Jeppesen as to their location on the building.³³ Little survives of the so-called Centaur frieze –

³⁰ BM Sc. 1051; Waywell, *Free-standing* (n. 3 above) 106-107, cat. 30, pl. 16 (Leto). BM Sc. 1058; Waywell, *Free-standing* (n. 3 above) 118-19, cat. 48, pl. 22 (Apollo); Jeppesen, *Maussolleion* (n. 3 above) 109-17.

³¹ Jeppesen and Zahle, 'Investigations' (n. 7 above) 76, fig.5; Jeppesen 'Das Maussolleion' (n. 3 above) 117, fig. 8; Jeppesen, *Maussolleion* (n. 3 above) 183-87.

³² J. C. Carter, *The Sculpture of the Sanctuary of Athena Polias at Priene* (London 1983) 59-63; K. Tancke, *Figuralkassetten griechischer und römischer Steindecken* (Frankfurt 1989) 18-22, pls. 10-19; Jeppesen, *Maussolleion* (n. 3 above) 77-96.

³³ Jeppesen 'Das Maussolleion' (n. 3 above), 162.3-4; B. F. Cook (with B. Ashmole and D. Strong), *Relief Sculpture of the Mausoleum at Halicarnassus* (Oxford 2005) 30-34 on location.



Figure 6.10 Two blocks of the Amazon frieze from top of podium. Courtesy The British Museum.

one block only and some fragments of others – which Cook and Jeppesen believe was not originally extensive (Fig. 6.11). They assign it to the sides of the plinth supporting the colossal chariot group, crowning the monument.³⁴ Then there is the Chariot frieze (Fig. 6.12). This is very fragmentary, but sixteen individual chariots, each with a driver and drawn by four horses galloping one behind another, have been identified. These are assigned to the top of the cella wall, possibly on the short front sides only. The thickness of the blocks varied between 0.096 and 0.155m. Made of particularly fine marble, they were carved separately as individual plaques and inserted into the wall.³⁵

³⁴ Jeppesen 'Das Maussolleion' (n. 3 above), 175; Jeppesen, *Maussolleion* (n. 3 above) 70

³⁵ Jeppesen 'Das Maussolleion' (n. 3 above) 175; Jeppesen, *Maussolleion* (n. 3 above) 154.



Figure 6.11 Block of frieze showing battle between Greeks and Centaurs. Courtesy The British Museum.



Figure 6.12 Charioteer from frieze possibly at top of cella wall. Courtesy The British Museum.

Much of what we know of the Mausoleum in detail is owed to Jeppesen. His reconstruction is the product of a lifetime's dedication, and no one can claim more than he to have taken account of all the evidence. His Mausoleum, however, is not without its own problems. Many will find a weakness in the emendation of Pliny's text from 25 to 75 cubits. The variable inter-axial measurement is also problematic in a building which is in other respects so regular. It may also be asked how visible his gallery of statues set back against the cella wall would have been to the spectator at ground level. Nor do all the different scales of freestanding sculpture seem comfortably accommodated, as they are in Waywell's reconstruction.

Krischen and Hoepfner's Mausoleum

Hoepfner raises several major objections to Jeppesen's scheme.³⁶ He thinks that a variable inter-axial measurement is unthinkable in such a regularly-planned building. He further insists that the inter-axial span must be commensurate with the architectural elements above, and form a regular and symmetrical pattern with, for example, the lion head spouts. Hoepfner's own reconstruction resembles in many ways that of Fritz Krischen, who was at pains to find a system of proportions that could be reconciled with the measurements given by Pliny. He insisted, therefore, as does Hoepfner, on an inter-axial span of 3.15m. For Krischen this had represented nine so-called Ionic feet of 35cm.³⁷ Hoepfner prefers a foot of 30.08cm. A span of 3.15m therefore represents 10.5 feet. This is the equivalent of three sima blocks and such a span would allow a regular and coordinated sequence of column and lion-head spout, as indeed is the case with the Temple of Athena Polias at Priene.³⁸

In Krischen and Hoepfner's reconstruction the wider spacing of the columns, resting on a stepped stylobate, means that the need to insert steps into the podium is eliminated. Unlike Waywell and Jeppesen, therefore, they have no place to accommodate the greater part of the freestanding sculpture. Hoepfner resorts to the suggestion that this was displayed along walkways near ground level on the Mausoleum terrace, but there is no evidence for this. Hoepfner does accept, at least for the long sides, Jeppesen's suggestion of a raised shelf running along the cella wall in order to accommodate some colossal freestanding figures. Others he places between the columns, but set back behind the line of them, as in the case of the Pergamum altar.³⁹

Hoepfner shares Krischen's desire to reconcile his reconstruction with the measurements given by Pliny. For him, however, as for Krischen, the hardest of Pliny's measurements to resolve is the impossible length of the building given as 63 feet. Krischen got around the problem by amending the text. This altering of a literary source to make the text fit the theory, instead of the other way round, always weakens any argument. Hoepfner's solution is to accept the received version and to take this as the length of the cella. In so doing he

³⁶ Hoepfner, 'Zum Maussolleion' (n. 10 above) 97-98; W. Hoepfner, 'Das Mausoleum von Halikarnassos: Perfektion und Hybris, in *Die Griechische Klassik, Idee oder Wirklichkeit* (Berlin 2002) 417-23.

³⁷ Krischen, *Weltwunder* (n. 11 above) 96-101.

³⁸ Hoepfner, 'Zum Maussolleion' (n. 10 above) 98.

³⁹ Hoepfner, 'Zum Maussolleion' (n. 10 above) 106-07.

reduces the size of the cella and enlarges the pteron accordingly. This increased space he fills with a second series of columns and in the porches at either end he has a third row of three columns in each to create a forest effect similar to that of the great temple of Artemis at Ephesus.⁴⁰

Hoepfner's is a fully rational and regular Mausoleum. Pliny, for example, says that the upper part of the building, that is to say the roof, is equal to that below, which can only mean the pteron. Hoepfner, therefore, devises a scheme which divides the elevation into three equal parts. The first is the podium from the foot of the krepidoma to the first step of the top of the podium; the second part comprises the distance between the top of the podium and the top of the sima; the third comprises the top of the sima to the top of the heads of the figures that Hoepfner assumes stood in the chariot. Each division measures $46\frac{2}{3}$ x his foot of 30.08cm, equal to 140 feet.⁴¹

Krischen and Hoepfner place the Centaur frieze under the Amazon frieze. As they are the same thickness, this seems possible, but Jeppesen had already discounted the idea in 1975, on account of the unique foot moulding of the Centaur frieze, which he thought incompatible with the smooth ashlar masonry immediately below.⁴² Like Jeppesen and Cook, Krischen places the chariot frieze as a crown to the cella wall, but Hoepfner objects on grounds that this would run counter to what he perceives to be the grammar of Greek architecture. It is not, he says, possible to place a cella frieze at the same height as the columns.⁴³ Hoepfner locates the chariot frieze around the walls of the burial chamber which, according to him, was barrel vaulted in its ceiling.⁴⁴ Jeppesen and Cook, however, are adamant that the surviving fragments of the chariot frieze indicate too many blocks of too great a length to be accommodated around the walls of the chamber.

It is usually assumed that the burial chamber placed off-centre in the podium was the only room in the entire building. Krischen, however, argued the case for a room in the cella, arranged around a massive central pillar supporting the pyramid of the roof. Hoepfner too believes that the cella could be entered through a porch from the pteron and that there was a cult space with a high false-vaulted or corbelled ceiling reaching up into the apex of the pyramid roof.⁴⁵ Without horizontal beams connecting the upper parts of the walls, Jeppesen believes the outward thrust of the pyramid steps and the weight of the quadriga pressing down on them would have caused Hoepfner's cella building to have fallen down.⁴⁶

Hoepfner concludes that the Mausoleum was an Ionian, regular grid-building with signs of arithmetical planning. Pliny says the circumference of the Mausoleum was 440 feet. The cutting for the foundations of the monument suggests a width for the building of 100 feet and a length of 120 feet. Pliny gives the height of the monument as 140 feet. These measurements may suggest a relationship of 5, 6, 7, where one is equal to twenty.

⁴⁰ Hoepfner, 'Zum Maussolleion' (n. 10 above) 98-100.

⁴¹ Hoepfner, 'Zum Maussolleion' (n. 10 above) fig. 7.

⁴² Jeppesen and Zahle, 'Investigations' (n. 7 above) 76.

⁴³ Hoepfner, 'Zum Maussolleion' (n. 10 above) 107.

⁴⁴ Hoepfner, 'Zum Maussolleion' (n. 10 above) 107-10.

⁴⁵ Hoepfner, 'Zum Maussolleion' (n. 10 above) 110-11.

⁴⁶ Jeppesen, *Maussolleion* (n. 3 above) 55.

The Mausoleum is seen to have such features in common with other buildings erected in the Hekatomnid era, including the Temple of Athena at Priene and the Temple of Zeus at Labraynda. In this last, for example, the diameter of the underside of the lowest column drum is in a 3:8 relation to the inter-axial span of the intercolumniation; at Priene it was 4:7; on the Mausoleum it was 5:9. This greater width in the Mausoleum can be accounted for by the intention of placing sculpture between the columns.⁴⁷

Conclusion

Hoepfner's is on paper at least a compelling argument and is likely to be taken up by those seeking a tidier Mausoleum than the one offered by Jeppesen, with its variable intercolumniation. It has, however, been rejected by Jeppesen on the basis of concrete evidence, and his authority is difficult to challenge. If we were to pass judgement on all three proposals, it might be that Waywell's is primarily concerned with the sculpture, while Hoepfner's is motivated more by an interest in architecture and a desire to apply a literal reading of Pliny. Jeppesen's is the one that makes the most conscientious attempt at considering both sets of evidence together and at finding a fully integrated solution. It is, however, rather difficult to follow all his conclusions.

At the end, therefore, we are left with three competing options for reconstructing the Mausoleum of Halicarnassus, each with individual merit and none of them fully consistent with the testimony of Pliny.

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⁴⁷ Hoepfner, 'Zum Maussolleion' (n. 10 above) 111-13.