

[free trial issue](#)[subscribe](#)[back issues](#)

## *Athena Review, Vol.3, no.3: Minoan Crete*

### **The Palaces of Minos at Knossos**

**Colin F. Macdonald**

*The British School of Archaeology at Athens*



The great "Palace of Minos" at Knossos is really a succession of palatial structures built upon the Neolithic "tell" site of Kephala (fig.1) some 7 km south of the modern harbor town of Herakleion (Venetian Candia). While older, monumental buildings perhaps dating as early as the EMIII phase may have been precursors to the later structures, the first clearly recognizable palace, called the Old Palace, was apparently not established until MMIB. After an earthquake destroyed this early palace in MMIIIA, a grand New Palace was built over it in MMIIIB (fig.2).

Careful examination of the dating of walls and features at Knossos, however, reveals that this palace, too, suffered significant damage by earthquakes and was largely rebuilt at the start of the LMIA phase, when additional structural walls and embellishments formed what I tentatively call the Frescoed Palace. Finally, this palace, as well, was destroyed, and remained in much more limited use in the LMIB period, which I thus refer to as the Ruined Palace. The final incarnation of this structure was the fully functional Mycenaean Palace of LMII-III A, which housed the Linear B archives.

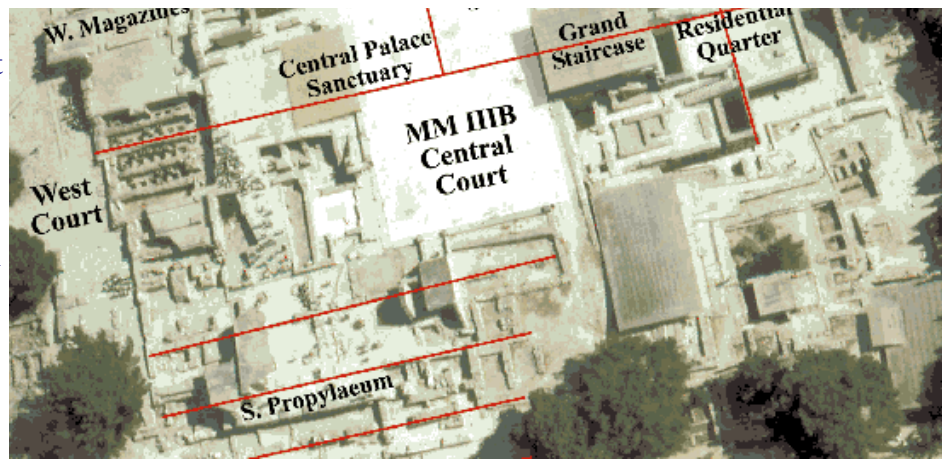
[Fig.1: Knossos, viewed from the east (photo: C. Macdonald).]

This paper will focus primarily on evidence that clarifies some of the construction phases occurring from the mid-17th to mid-15th centuries BC, from the New Palace to the Ruined Palace. It is only by investigating these detailed developments in the palace architecture that we can begin to understand how the function of the palace changed over time.

*The Earliest Palaces:* The site on which the series of later palaces was built preserves the oldest human habitation remains yet known on Crete. The earliest occupation, lacking pottery and known as the Aceramic Neolithic, happened around 7000 BC. Successive settlements were laid down one on

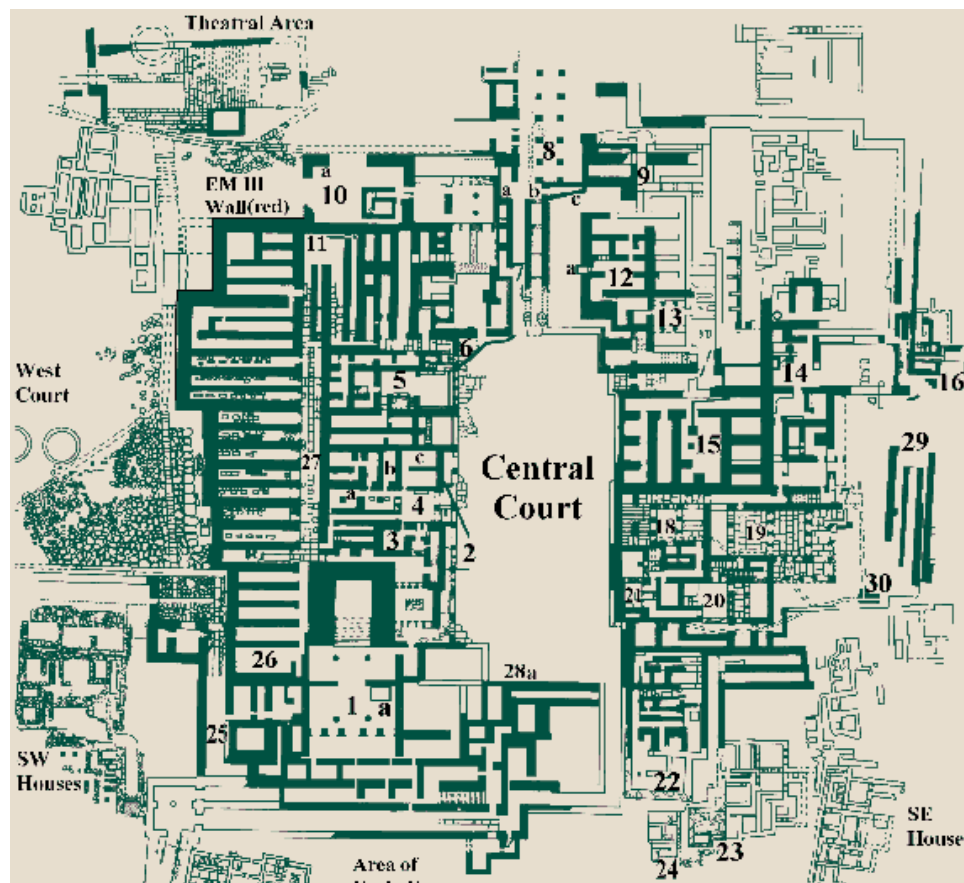


top of the other. As houses collapsed or burnt down, new ones were built upon the levelled remains. The ruins of these structures, usually of unbaked mud-brick on stone foundations, created an artificial mound now surrounded by pine trees and cypresses (fig.1). It is the only true "tell" site in the south Aegean area and, by the 6th millenium BC, it covered almost the same area as the later palace, and had expanded to around 11 acres by the time of the transition to the Bronze Age.

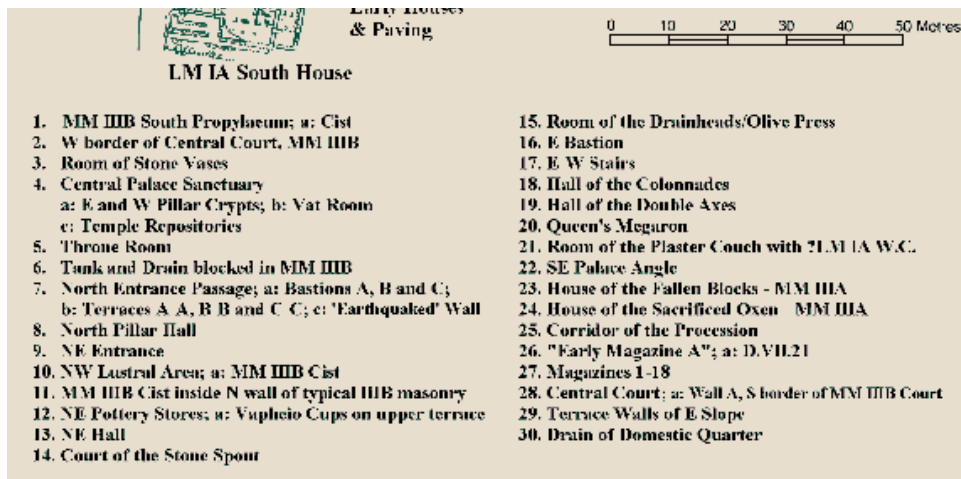


We know little of the Early Bronze Age buildings at Knossos, apart from the so-called Early Houses on the southern border of the later palace and the West Court House. Towards the end of the Early Bronze Age (EMIII), a substantial structure was erected in the northwest area of the later palace (fig.3, in red). The northwest and west façades of the later palace appear to have followed the lines of a massive wall up to 2.5 m thick, ending against the Neolithic deposit just south of Magazine XI. At least the orientation followed by the Palace of Minos was established towards the end of the 3rd millennium.

[Fig.2: Aerial view of the Palace showing area of MM IIIB Central Court; planning lines in red (photo: C.Macdonald, with thanks to HMS Brilliant).]



The Early Minoan III "megastructure" was lucky to survive at all, since the construction of the Second or New Palace in the first half of the 17th century BC appears to have removed most earlier structures on the west side of the hill down to Neolithic levels. Even securely dated remains of the First Palace, established in Middle Minoan IB, are few and far between. It is assumed that the Old Palace was broadly built on the same lines followed by the New



Palace, but too little is known about it to be sure, and what it looked like is largely based on projecting back from the New Palace. However, in 1973 and 1987, discoveries made by M.S.F. Hood with the present writer gave an interesting glimpse of the possible form of

the first phase of the Old Palace. Tests in "Early Magazine A" revealed a burnt destruction deposit of the Middle Minoan IB phase, next to an impressive wall of limestone and gypsum blocks about 1.5 m thick (fig.3 in blue; fig.4 right). Over 150 cups of the crudest to the finest quality (fig.5) had fallen to the ground from wooden shelves, which had burnt during a major destructive episode. The thick east-west wall, with the earliest datable mason's mark in the form of a Double Axe carved on one block, is likely to have been an exterior wall facing south and is built up against Neolithic deposits on the interior. This, combined with its alignment with the Late Minoan southern limits of the Central Court and the fact that only scanty contemporary remains have been found to the south, indicate to me that the wall is a candidate for the earliest south façade of the Old Palace.

[Fig.3: sketch plan of the Palace emphasizing the Middle Minoan IIIB phase (*compiled by C. Macdonald*).]

The Old Palace would have grown during the Middle Bronze Age, perhaps covering much the same area as the later New Palace. This is particularly noticeable on the east side of the hill, where very deep deposits of Middle Minoan II and IIIA were sealed beneath paving of the New Palace. The latest pottery beneath the slab floors of the New Palace on the east side appears to date the end of the Old Palace at Knossos. Unlike the palace at Phaistos in the south, where a massive earthquake destroyed the Old Palace at the end of MMIIIB, the Old Palace of Knossos may have suffered a milder shock and continued to function until Middle Minoan IIIA, around the beginning of the 17th century BC. Around this time, it was hit by a massive earthquake. The earthquake is dramatically illustrated by the Houses of the Fallen Blocks and Sacrificed Oxen outside the southern border of the Palace, and by the tripartite building at Anemospelia a few km away on Mt. Juktas, where large storage jars may even have fallen on the line of the seismic shock (fig.4).

This great earthquake, which affected north-central Crete most, marked the architectural divide between the Old and New Palaces of Knossos, and ushered in an era of construction the likes of which the island had never seen. For not only was the Palace of Minos built with the layout we essentially see today, but also Knossian architectural features were adopted elsewhere on the island in other palaces, some still to be discovered, and some non-palatial buildings.

*The New Palaces of Knossos: When Evans*





excavated the Palace at Knossos, digging tended to go down as far as the first formal floor to be reached. More often than not, this would be the original slab flooring of the New Palace laid down towards the end of the 17th century BC (Middle Minoan IIIB). However, the pottery and other objects found near these floors rarely belonged to this first phase, but rather to later phases of occupation, when the original floors continued in use or new ones were laid, often of earth and plaster, only a few centimeters above the old. It is, however, possible to find remains of the first period at specific locations dotted around the Palace. These deposits give us some clues as to its character and some of the activities that took place when it was first built. I have called this palace the New Palace, pure and simple, yet grand and ambitious.



[**Fig.4:** East room at Anemospelia, with fallen pithoi (large storage jars) (*photo by permission of I. and E. Sakellarakis*).]

The following phase, LMIA, covering much of the 16th century BC, is subtly different from that which went before, largely because alterations had to be made to the original design which seems to have overstretched itself in terms of roof spans. An earthquake had struck once again and broad architectural units such as the South Propylaeum and North Entrance Passage had to be modified so as to be less vulnerable to seismic damage. Walls were erected to reduce the size of rooms and provide greater support for the upper floors. The North Entrance Passage was given supporting bastions built of masonry every bit as fine as in the preceding period. However, the most remarkable changes were to be seen in the frescoed walls which now greeted the visitor, whether above the new North Entrance Bastions or along the corridor leading from the West Court around the southwest to the South Propylaeum and possibly the Central Court itself. The entrance was given the name "Corridor of the Procession" by Evans due to the frescoes (fig.5) that adorned its walls in the later Mycenaean period (LMII-III A), but there is evidence that a comparable composition was in place by LMIA. I have called the Palace in this phase the "Frescoed Palace," since monumental frescoes designed for public viewing were probably one of the most striking new features at this time of rebuilding.



Another destruction divides this palace phase from the next, which saw the construction of new walls - sometimes doubled for extra support. We shall discuss this phase briefly later; for now, our concern is the evidence for differentiating the New Palace from the Frescoed Palace.

*The Evidence for Defining the New and Frescoed Palaces:* To characterize the two Palaces described above is a relatively new idea. The evidence, however, is suggestive rather than conclusive. I have selected 5 areas where there is evidence of relevant architectural change.

*The South Propylaeum* (figs.3:1;10): This structure was a monumental entrance to the upper floors of the West Wing of the Palace. Entrance to the Palace complex had already been gained through a corridor from the southeast corner of the West Court, along the "Corridor of the Procession" (fig.3:25). The corridor ran along the south side of the Palace to both the South Propylaeum and the Central Court.



The plan of the Propylaeum as we see it today belongs to our second phase, the Frescoed Palace of LMIA. Before that, when first built, it was of substantially larger proportions - a more impressive and architecturally challenging structure. Its original side walls can be seen today, some two and a half meters to the west and east, indicating that the entrance was monumental. A sunken stone-built cist (fig.3:1a) lay in the northeast corner of the south section. It is this cist which provides the secure dating evidence for a change in the entrance, for the east wall of the later Propylaeum runs over the top of it.

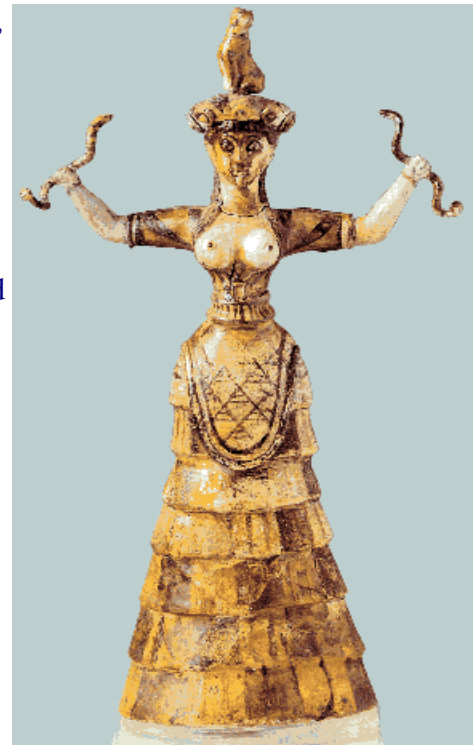
[**Fig.5:** The Cup-bearer Fresco (*after M. Cameron, in D. Evelyn 1999*).]

For the Propylaeum rebuilt after the earthquake at the end of this phase, we can quote the words of Evans: "If the M.M. III walls were already ... compounded of the ruins of earlier structures, the rubble material of this later (Late Minoan IA) fabric represents the ruin of a ruin." It seems likely that these later rubble walls were decorated with monumental frescoes, which would have been the precursors of the well-known "Cup-Bearer" fresco (fig.5) usually dated to Late Minoan IB-II.

*The Central Palace Sanctuary* (fig.3:4): As preserved today, the Central Palace Sanctuary is a series of rather small rooms surrounding a paved public room, known as the Lobby of the Stone Seat after the carved stone bench that was installed after the MMIIIB earthquake. The area includes some of the most famous rooms of the palace: the East and West Pillar Crypts, the Vat Room, and the Temple Repositories Room containing the enormous cists or repositories in which were found the faience goddesses (fig.6), and a wealth of other ritual objects, carefully deposited beneath numerous clay vases.

[**Fig.6:** Faience goddess from the temple repositories (*after A. Vasilakis*).]

The eponymous stone seat in the Lobby is the first obvious sign that the arrangement of the rooms when first built was somewhat different, since it blocks a multiple doorway, known as a polythyron. The Lobby was surrounded by polythyra on three sides, all of which were blocked or modified after their original construction. The two great stone-built Repositories lay in a room about twice its present size, as it would have included the neighboring Room of the Tall Pithos. The Pillar Crypts may also have been a single room with 6 pillars, in my opinion, but this is by no means certain. At any rate, when this West Wing of the Palace was built in MMIIIB, it appears to have been the central Sanctuary area, perhaps supporting religious activities occurring in the Central Court. A large number of storage vessels used for liquids, some from the Cyclad island of Meolos decorated with bulbous birds (fig.7), were found inside and may originally have been kept in the room for serving wine or other beverages.



After the MMIIIB earthquake, the layout was drastically changed, with several of the spacious square rooms being divided into two rectangles. The blocking of the polythyra belongs to this stage. The absence of the great Repositories may indicate that ceremonies in the Central Court underwent a change in the second phase of the New Palace, perhaps with less emphasis on mass

participation than before. LMIA may also have been a period during which access to the Central Court was more restricted, as we shall see in connection with the North Entrance Passage.



*North Entrance Passage and North-West Lustral Area* (figs.3:7 and 10; 17): Essentially, the entrance is composed of two massive walls running north-south, onto which have been imposed "Bastions," as Evans called them, liberally incised with the "Trident" mason's marks. The tighter control of access to the Central Court created by the construction of the Bastions may well be contemporary with the monumental bull fresco, a very public display of power associated with the Palace. This may further justify naming the Late Minoan IA Palace as "the Frescoed Palace."

[Fig.7: Cycladic Bird Jug from Temple Repositories (after M. Panagiotaki 1999, fig.38).]

To the west of the North Entrance Passage lies the North-West Portico, probably constructed at the same time as the Bastions, for they have a shared or party-wall. Evans placed the North-West Lustral Basin in an earlier period, MMIIIA, which was, for him, the

start of the New Palace period. It lies to the north of a hefty wall of a construction style that I associate with the New Palace of MMIIIB (a cist was recently found inside this wall and dated to MMIIIB). The area is, perhaps, best known for the discovery of the white alabaster lid bearing the cartouche of the Egyptian Hyksos king, Khyan (fig.8). Egyptian finds in stratified or datable contexts are important for the absolute chronology of the Aegean Bronze Age, and the "Khyan Lid" has long formed an important marker for the Middle Minoan IIIA period, to which Evans assigned both the lid and the destruction of the Lustral Basin. It may also be an indication of personal links between the Hyksos ruler and Knossos. Arguments have raged over both the Minoan date of the lid and the date of the Hyksos king. On the Egyptian side, Khyan is now placed around 1600 BC by K.A. Kitchen, whose Egyptian chronology is that most usually accepted as being close to the truth. On the Minoan side, no pottery now exists that could confirm or contradict Evans' MMIIIA date. However, of some relevance may be yet another cist discovered in 1929, a few meters to the north of the lid's findspot. It was filled with pottery and set in black earth, perhaps an indication that this was clearance of destruction debris. The latest pottery from here appears to me to belong to the end of the Middle Bronze Age (MMIIIB) and to be contemporary with that in the South Propylaeum.

*Court of the Stone Spout* (figs. 3:14; 23): Moving around to the northeast section of the Palace - a little way from the North-East Magazines (fig.3:12), which were probably overwhelmed and buried in the MMIIIB earthquake - is an open area bordered on the west by a massive wall similar to the Bastions of the North Entrance, not least due to its "Trident" mason's marks. By contrast, this wall, which has the eponymous stone spout in its fourth course, appears to go back to the beginning of the New Palace and to have been part of the original





design. Pottery from beneath it can be assigned to the preceding MMIIIA phase, whilst vases from the fill of the court's well belong to the next MMIIIB phase, probably representing unbroken debris deposited while clearing up after the earthquake.

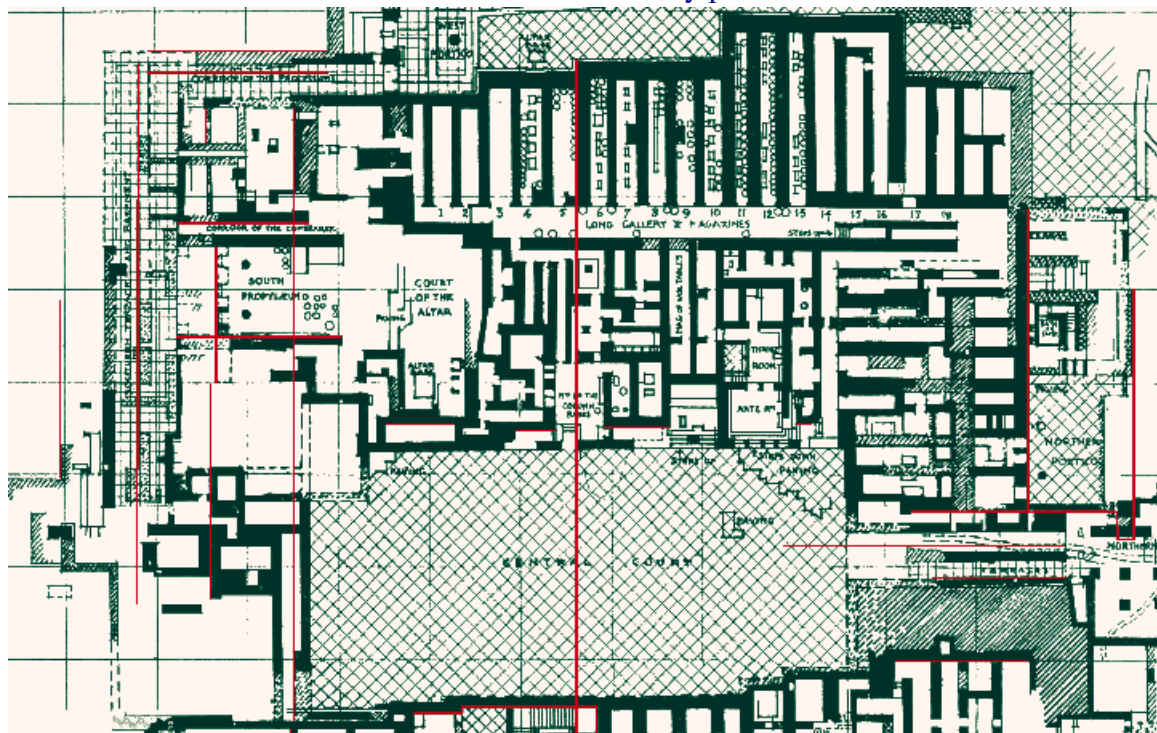
[Fig.8: Egyptian alabaster lid of Hyksos King Khyan, ca. 1600 BC (from A. Karetsou).]



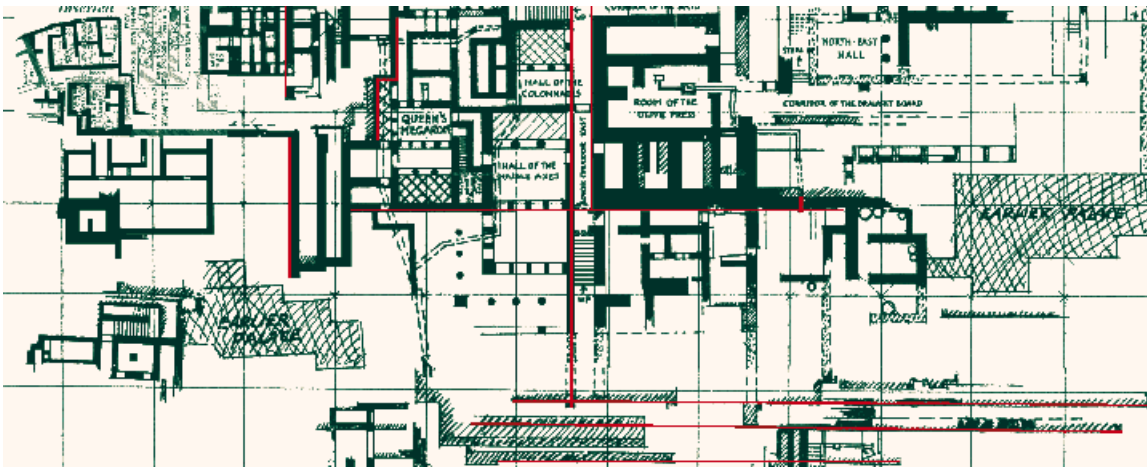
Other important areas were definitely laid out at the start of Middle Minoan IIIB, notably the Throne Room Complex (fig.3:5) and, perhaps, the Domestic or Residential Quarter (fig.3:18-20). The West Magazines (fig.3:27) may have had a long history, but their present form and the West Façade of the Palace most probably date to the start of the New Palace.

The function of the Palace appears to change over time, some changes being subtle and others more radical. The level of change can only be properly assessed once we understand the architectural changes that took place, as far as this is possible from the recorded and remaining evidence.

*The MMIIIB New Palace: A Single Conception?:* Despite the absence of a detailed phase plan of the Palace, we can make certain observations relating to the original MMIIIB form of the New Palace. First and perhaps most important are the borders of the MMIIIB Central Court (the light rectangular area in fig.2 shows an approximation of the MMIIIB court). It has long been known that the line of the east wall of the Temple Repositories marked the west side of the court in MMIIIB. The steps down to the Lobby of the Stone Seat and those of the Antechamber of the Throne Room were additions of the next phase. This in itself is interesting, since the north-south dividing line of the Central Court would then have fallen midway between the original walls of the North Entrance Passage before the Bastions were built. The southern limit of the Central Court is more difficult to define. Today it is marked by the paving in the southwest of the court, which forms a corner. In MMIIIB, the court probably went as far as a much-destroyed wall, constructed of massive blocks some meters to the south. I recently planned this wall in detail and it is clearly a



major terrace wall, ideally suited to support the



southern end of the Central Court. Indeed, this wall marks the southern border on one of the early plans of the palace reproduced here (fig.9). Assuming that this was the original south end of the MMIIIB Central Court, the midway east-west line of the court runs through the center of the Lobby of the Stone Seat, making the Central Palace Sanctuary the precise architectural center of the west side of the Court. The line continues along the major dividing wall between West Magazines V and VI ending at an indentation of the West Façade. This axis can also be extended to the east, running along the north side of the colonnades of the Grand Staircase, the north side of the north wall of the Hall of the Double Axes, and on down the hill. This then places the Grand Staircase precisely in the middle of the east side of the Central Court. These north-south and east-west axis lines of the Palace are marked in red in fig.3. They are the first clear indicators of a unified design for the MMIIIB New Palace.

**[Fig.9: Plan of Palace as it was in 1902 (after T. Fyfe, BSA 8, 1901-1902, pl.1).]**

All of these observations concerning alignments and wall spacings indicate that the New Palace of MMIIIB was designed as a single coherent structure by one architect, or a group working together. The hill was surveyed; account would have been taken of existing walls, particularly for structural purposes and terracing; the plan was then drawn up and executed using a massive amount of manpower both on and off site, as the discussion of the use of architectural embellishments for the MMIIIB palace has emphasized.

A strong earthquake then severely damaged this New Palace of somewhat over-ambitious proportions. A program of repair and rebuilding was put into effect, although it seems to have succeeded in excluding sections of the community that had lent its support to the original project. Architectural embellishment was replaced at certain points by wall-painted decoration and routes of access were restricted, notably at the North Entrance. Further research is needed to ascertain just how different this Late Minoan IA Frescoed Palace was from its MMIIIB predecessor. Indeed, the uncertainty surrounding the precise date of many frescoes remains an impediment to unambiguous interpretation.

*The Ruined Palace of LMIB:* As for the successor to the LMIA Palace, there is no concrete evidence for occupation during LMIB. Some walls and stairs may be dated to LMIB by the LMIA material beneath them. However, general rebuilding must have taken place at this time. In addition, I think work was interrupted in LMIB by yet another catastrophic earthquake, before the Palace could become fully functional. It is interesting that outside the palace, although LMIB destructions have been discovered, four excavations have produced an archaeological sequence where LMIA is followed by LMII, indicating a gap in occupation at those sites. We should, therefore, at least be open to the suggestion that even the palace was not fully occupied during



LMIB, perhaps due to reconstruction works.

Through all this, of course, at least the West and Central Courts would have remained intact. If they were the focuses of ceremonial and religious activity in MMIIIB and LMIA, they could have continued as such even when the Palace was ruined or under reconstruction. Hence the name I have nominally attached to this third Neopalatial phase, the Ruined Palace. The succeeding Mycenaean Palace of LMII-III A was fully functional, not least on the bureaucratic level since it is to these periods that the Linear B archives belong. The Ruined Palace may merely be an intermediate phase that gave birth to the last true palatial buildings at Knossos.

It is unlikely that the descriptive names given to successive new palaces will remain in perpetuity. The New Palace presents no problems as a name already in use, but many scholars will take issue with the name Frescoed Palace. A more appropriate name may be supplied when we understand this substantially modified building better. The definition of rooms and architectural features is one key to the interpretation of its functions. That access was considerably restricted in this phase implies a changed relationship between the palace and Minoan town. Indeed, the palace may have become more elitist. So too, the Ruined Palace should gain greater form with more detailed work into the construction dates of walls and other architectural features. While I have suggested that the palace could have continued to exist in a ruinous state on a certain ceremonial level, it is hard to imagine its bureaucracy or storage facilities at a fully functional level. This, in turn, would have affected the role of Knossos on the broader Minoan political and economic stage unless a Knossian subsidiary such as Arkhanes could have filled the temporary vacuum. The picture will only become clearer by consolidating the work of the last 100 years in a period plan of the palace and with more detailed work on contexts and the changing character of the monument. A start has been made by a number of scholars and there is now a much greater awareness that there were many changes within the New Palace period at Knossos and beyond. What began as a single monumental undertaking in the mid-17th century BC was adapted to changing circumstances, both physical and social, until the Mycenaean-style administration emerged some two hundred years later. Piecing together the precise attributes and mechanisms of those changes remains an important challenge for the near future.

---

[Note: This is an abridged version of the article "**The Palaces of Minos at Knossos**" by Colin F. Macdonald, whose full text and illustrations appear in the printed issue of Vol.3, no.3 of *Athena Review* (pp.36-43). Copyright 2003, Athena Publications, Inc.]

---

### *Bibliography:*

Andreadaki-Vlasaki, M. and N. Papadakis. 2000. Crete-Egypt. Herakleion.

Driessen, J. and C.F. Macdonald. 1997. The Troubled Island. Minoan Crete Before and After the Santorini Eruption. *Aegeum* 17.

Evans, A.J. 1921-1935. The Palace of Minos at Knossos. Vols. I-IV. London, Macmillan and Co.

Evans, J.D. 1968. "Knossos Neolithic, Part II," in *BSA* 63, pp. 267-276.

Evans, J.D. 1971. "Neolithic Knossos: the Growth of a Settlement," in *PPS* 37, pt. 2, pp. 95-117.

Hood M.S.F 1996 "Back to Basics with Middle Minoan IIIB," in D. Evely, I. S. Lemos, and S.

Sheratt eds. Minotaur and Centaur, 10-16.

Hood, M.S.F. 2002. "Cretan Fresco Dates," in Proceedings of the International Symposium, the Wall Paintings of Thera (Thera 30 August/1 September 1997), vol. 1, pp.191-208.

Hood, S. and W. Taylor. 1981. The Bronze Age Palace at Knossos: Plan and Sections. Oxford.

Kitchen, K.A. 1996. "The Historical Chronology of Ancient Egypt, a Current Assessment," in Acta Archaeologica 67 (1996) 1-13.

Macdonald, C.F. 2002. "The Neopalatial Palaces of Knossos" in Monuments of Minos: Rethinking the Minoan Palaces. Proceedings of the International Workshop, "Crete of the Hundred Palaces?" Louvain-la-Neuve, 14-15, December 2001. Aegeum 23. eds. J. Driessen, I. Schoep, and R. Laffineur.

MacGillivray, J. A. 1998. Knossos: Pottery Groups of the Old Palace Period. British School at Athens St. 5 (1998).

Momigliano, N. and D.E. Wilson. 1996. "Knossos 1993: Excavations Outside the South Front of the Palace." In BSA 91, pp. 1-57.

Myers, J.W., E.M. Myers, and G. Cadogan eds. 1992. The Aerial Atlas of Ancient Crete. U. of California Press.

Panagiotaki, M. 2000. The Central Palace Sanctuary at Knossos. British School at Athens Suppl. Vol. 31.

Papazachos, B. and C. 1997. The Earthquakes of Greece. M II vol.I, 296-303.

Pendlebury, J.D.S. 1954. A Handbook to the Palace of Minos, Knossos, with its Dependencies. London.

Warren, P.M., and V. Hankey. 1989. Aegean Bronze Age Chronology. Bristol.

---

[Athena Review Image Archive™](#) | [Paleoanthropology in the News](#) | [Guide to Archaeology on the Internet](#) | [Free issue](#) | [Back issues](#)

[Main index of Athena Review](#) | [Subject Index](#) | [Travel Pages](#) | [Galleries and Museums](#) | [Ad rates](#) | [Current issue index](#) |

---

Copyright © 1996-2003 Athena Publications, Inc. (All Rights Reserved).