# Preliminary Report on the Results of the 2009 Excavation Season at Tel Kabri 

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The 2009 excavations at Tel Kabri, the capital of a Middle Bronze Age Canaanite kingdom located in the western Galilee region of modern Israel, lasted from 21 June to 30 July 2009. A bighlight of the season was the discovery of numerous fragments of painted plaster, from both a previously-unknown Minoan-style wall fresco with figural representations and a second Aegean-style painted floor.

The 2009 excavation season at Tel Kabri in Israel was co-directed by Assaf Yasur-Landau of the University of Haifa and Eric H. Cline of The George Washington University. It was undertaken with a grant from the Institute for Aegean Prehistory (INSTAP), with additional funding provided by The George Washington University, equipment provided by Dr. Alon Shavit, Director of the Israeli Institute of Archaeology, and assistance in conservation and storage provided by the Leon Recanati Institute for Maritime Studies, directed by Dr. Yaacov Kahanov, to all of whom we are most grateful. Senior staff members included Nurith Goshen of the University of Pennsylvania, Alexandra Ratzlaff of Boston University, Inbal Samet of the University of Haifa, Helena Tomas of the University of Zagreb (Croatia), Neculai Bolohan of the University Al. I. Cuza (Romania), and Celia Bergoffen of the Fashion Institute of Technology (New York). The international team of nearly 70 people included volunteers and staff from the United States, Israel, England, Ireland, Finland, Austria, Australia, Canada, Romania, and Croatia (Fig. 1).


Fig. 1. Volunteers and Staff from the first half of the season (21 June - 9 July 2009) at Tel Kabri, Israel.

As mentioned in previous reports, earlier excavations conducted at the site by Aharon Kempinski and Wolf-Dietrich Niemeier from 1986-1993 had revealed the remains of a Canaanite palace dating to the Middle Bronze II period (ca. 1700-1550 BCE). Within the palace they discovered an Aegean-style floor and an Aegean-style miniature wall painting. Kabri is one of only four sites in the Eastern Mediterranean to have such Bronze Age Aegean-style paintings and may well be the earliest. Excavations were resumed at the site by the present investigators in 2005, with preliminary four-week excavation seasons in 2005 and 2008 and survey seasons in 2006 and 2007 (reports from these seasons can be found at http://digkabri.wordpress.com/previous-results/). The excavations in 2009 marked the beginning of extended excavations at the site, with the season lasting for six weeks. It is anticipated that excavations will now continue every other year, with study seasons in between.

We are pleased to report that the 2009 season of excavations at Tel Kabri met with a great deal of success. We were able to successfully identify the northern external wall of the palace and to excavate a drain/corridor area full of pottery in Area D-West as well as to link our excavations in Area D-South with those of Kempinski and Niemeier in Area F while at the same time exposing new architectural features belonging to the southeastern wing of the palace in this area (Figs. 2a-c). In both D-West and DSouth we found numerous fragments of plaster, including painted fragments coming from at least one additional wall fresco and one additional floor, all painted using Aegean-style techniques. Some of these have pictorial representations in white or red in front of a blue background, which have parallels to contemporary compositions found on Crete (as well as to later compositions on Mainland Greece). Tel Kabri therefore probably has both Cycladic and Minoan painted walls and floors, including the first identifiable Minoan frescoes to be found in Israel. The discovery of these fragments within specific contexts also helps to further refine the chronology and history of the palace and the overall site.


Figs. 2a-c. Principal areas of excavation in 2009: D-West (top left), D-South (top right), and F (bottom)

## Excavation Results

During the 2009 season, our efforts were concentrated in three main areas: 1) Area D-West, where we were attempting to identify the northern external (closing) wall of the palace and investigating further the nearby drain/corridor area begun in 2008; 2) Area D-South, where we continued our excavations begun in 2005 in an effort to identify the function of the buildings in this area and to link our excavations with those of Kempinski and Niemeier located just to the south in their Area F; and 3) Area $F$ itself, where we continued the excavations begun by the previous investigators (Kempinski and Niemeier) in an effort to determine the nature of the area and the building(s) within it.

## Western portion of D-West

One of the aims of the previous 2008 and current 2009 excavation seasons was to find the northern external (closing) wall of the palace. Wall 673, a massive four-meter-wide wall which served as the northern wall of Room 740, was thought at the end of the 2008 season to be a likely candidate for this closing wall of the palace. Our excavations north and east of Wall 673 in 2009 have now shown that this hypothesis was correct and that Wall 673 is, in fact, the northern external wall of the palace.

It is now also clear that during an early phase of the palace, possibly the early MB II period, the area NE of Wall 673 had a non-monumental nature. Here was located a small structure with narrow 0.40.5 m .-wide walls, including at least two rooms, most of which is covered by later MB II remains. The northern room of this structure was formed by Walls 2051 and 2223 and the southern room by Walls 2293, 2223 and 2279. A plastered installation with a sherd surface, L. 2221, was found in the southern room by Wall 2223. The area between this structure and the outer wall of the palace was an open area, possibly a street, paved with flat lying sherds (L. 2061/2161). Numerous fish bones were found in this area, no doubt discarded by the inhabitants of the nearby structures.

During the latest phase of the palace, the nature of the area changed dramatically. A large stone foundation, 1.8 meter wide (L. 2129; Fig. 3a), was constructed directly on top of the foundations and walls of the earlier small structures. This foundation, parallel to Wall 673 in an NE-SW orientation, is different from any other construction seen elsewhere in the palace at Kabri, in that it is built as a series of segments, each stepping out slightly further to the south from the previous. It also has only one course of stones, which hinders its identification as part of a fortification wall. Its construction technique is somewhat similar to the tops of the walls of Ceremonial Hall 611, especially that of Wall 80009 - e.g. two faces of large stones, an inner fill of large and small stones, and a top coat of small stones used to create an even surface for either a mudbrick superstructure or on which to walk. Agricultural activities may have damaged any courses of mudbrick or other material which were once on top of this foundation, as well as removing most of the nearby surfaces that ran between it and Wall 673, the northern wall of the palace; a single fragmentary surface with many plaster fragments (L. 2235) may be all that is left from this open area.


Figs. 3a-b. Wall/Road 2129 being excavated (left) and a fragment of painted wall plaster (right) in Area D-West

At this point, therefore, we would like to suggest two possible options/interpretations. Either 2129 was a foundation for a perimeter wall encircling the palace or it was the foundation for a road or a walkway adjacent to the palace. If it is a wall, parallels can be found, for example, at Megiddo in the MB fortification wall of stratum XII and the external wall of the Stratum IX LB I palace. If it is a road or walkway, parallels will have to be sought elsewhere, including in the Minoan palaces on Crete.
L. 2027, with its deposits of wall plaster excavated in 2008, may be a part of a makeup material used for leveling the area during the construction of Wall/Road 2129. On top of Wall/Road 2129 itself were found numerous pieces of wall plaster, including several which were painted, at least one of which is probably from the same miniature-style fresco as the fragments discovered by Kempinski and Niemeier (Fig. 3b). The discovery of part of the Aegean-style fresco outside the palace, and at a distance from Ceremonial Hall 611, lends strong support to the idea that that this miniature-style wall fresco went out of use before the latest phase of the palace and was deposited in Threshold 694 during a renovation phase.

## Corridor within Palace in D-West

During the previous season of excavation, in 2008, we began the investigation of "Drain 2048," built through Wall 733, which formed the eastern part of a long and narrow space between W686 in the north and W 708 in the south originally interpreted by Kempinski as a possible staircase (Fig. 4a). We noted at the time that the long and narrow space, of which we excavated the easternmost part in 2008, was sealed on top by a plaster floor dating to the time of either the latest or the penultimate palace and that underneath this plaster surface there was a deliberate fill in most of the area that continued all the way down until the level of the "drain" and which contained much pottery.

Excavations during 2009 (Fig. 4b) revealed that below the white plaster floor (L. 2135, 2175) and its stone makeup (L. 2177, 2193), the area was filled with two distinct fills, each containing much restorable pottery still in situ.


Figs. 4a-c. "Drain 2048" with long/narrow space to west, as seen in 2008 (left); same view after excavation in 2009 (right); pottery in situ (below)

The upper fill level included much crushed limestone, and had a light brown color (L. 2145, $2195,2211,2219)$. Inside this fill were restorable vessels, most in situ, with their bases lying flat on the top of the lower fill level. Pottery included both closed vessels, such as storage jars and jugs, and some open forms, such as platters.

The lower fill level was dark brown in color, with conspicuously-less crushed limestone. It had no paved or plastered surface separating it from the upper fill, but was readily-discernable because of the contrast in color and inclusions. It also contained much pottery, including bowls, storage jars, cups and a large spouted krater (Fig. 4c). Preliminary observations indicate that red-burnished forms were more common in this level than in the upper one, suggesting a late MB I-early MB II date for the lower level, roughly contemporary with the initial construction of the palace (see our 2008 preliminary report).

Below this lower layer, a very dark brown layer containing MB I sherds as well as much organic material was found, very likely belonging to a domestic deposit predating the construction of the palace.

The use of this area, with its deliberate fills and two separate events involving the deposition of restorable pottery, is still unclear and so investigations will continue next season.

## Area D-South

## D-South and D-South 2 (DS-2)

Our excavations in D-South during 2009 had multiple goals, including the linking of our 2005 area with Kempinski and Niemeier's Area F located just to the south as well as uncovering more of the massive stone structures which were only partially visible at the end of the 2005 season (Fig 5a).

In order to achieve these goals, we opened Area D-South 2 (abbreviated as DS-2) in an unexplored space lying between the original Area D-South (to the north) and Area F (to the south), with the three areas separated only by baulks. This new area was divided into several squares, numbered from 1 to 4 running from east to west across the area. The impetus for excavating this area was to link our excavations with those of Kempinski and Niemeier as well as to determine the nature of the massive stone structure (L. 16008) uncovered running into the southern baulk of Area D-South in 2005.


Figs. 5a-b. Area D-South as seen from the north in 2005 (left); plan of new walls uncovered in 2009 (right)

Our excavations in DS-2 Squares 2-4 first uncovered the remains of a very large Iron Age pit (L. 1521) cutting the area. This was removed in order to prepare the area for future excavations of the MB II remains. At the same time, continued excavation within the original area of D-South as well as within DS2 Square 1 quickly showed that our 2005 excavations had indeed ended within a series of beaten earth surfaces and that our hypothesis that we were in an external area was probably correct.

This area was very likely an inner courtyard within the palace. It was bordered on the east by a massive stone structure, which had 1.1 meter thick walls (Walls 3041 and 3043, formerly Stone Feature 17006 of 2005) with stone foundations at least one meter deep and thick plaster floors (see the right side of Fig. 5b and Area DS-1 below). From the south and possibly the west, the courtyard was limited by a series of narrow 0.50-0.55 meter thick walls which seem to go almost in a zigzag pattern (see the left side of Fig. 5b), forming two corners in the southern part of D-South Square 16 (Walls 3085 and 3087, formerly Stone Feature 16008 of 2005) and the northern part of DS-2 Square 1 (Walls 4010 and 4018) and another possible corner in the southern part of D-South Square 15 (Walls 3091 [probably feature 15007 of 2005] and 3093). These may be walls of small-sized structures located to the north of the more monumental architecture of Area F (see below), or the bottom courses of low barriers used for penning or fencing. An additional wall in DS-2 Square 1, Wall 4016, may belong to the same building/ room south of the courtyard, formed by Walls 3087, 3085, 4081, 4010, 3091 and 4016. The entire area around these small walls was covered by pinkish mudbrick debris, different in hue and composition from other deposits in the palace. It remains to be seen if plaster floors will be found in DS-2 Square 1 below this collapse. In addition, it should be noted that pit 3013 continues into Square 1 as pit 4004, taking out the MB remains in its southern half

## D-South 1 (DS-1)

In order to further explore the massive stone structure (L. 17006) at the eastern end of Square 17 in the original D-South area, in 2009 a new area immediately to the east was opened which was dubbed D-South 1 (abbreviated as DS-1). It quickly became clear that this apparently-massive structure was in
fact a corner created by the meeting of two walls, one (Wall 3041/3017) running diagonally NW-SE across the more-northern Square 6 (Figs. 5b, 6a-b) and the other (Wall 3043, now partially robbed out by Iron Age pit L. 3013) running NE-SW into the more-southern Square 5.

Square 5 contained few material objects and was remarkable only for the crushed lime floor (L. 3053) which covered much of the area despite having been disrupted by the Iron Age pit in the southern part of the square (L. 3013). In the northwestern portion of the square, flat-lying pottery from one or more restorable vessels was recovered from among the destruction debris lying on Floor 3053. This material will undoubtedly connect with similar flat-lying pottery found on the same floor in the southwestern portion of Square 6, lying just to the north of the intervening baulk.


Figs. 6a-b. Plan of Area DS-1 (left) and Square 6 within DS-1 looking from NE-SW (right)
Square 6, however, was extremely interesting. Not only did Wall 3017 continue diagonally SWNE across the entire square, but a second wall (3027) connected with it and headed almost straight north near the eastern edge of the square, with a return running southwest to create a small chamber (3033), while a third wall (3031) connected with it and headed almost straight south near the western edge of the square (Fig. 6a). Moreover, as Wall 3017 disappears into the western baulk, a threshold can be seen - no doubt an entrance into a room lying to the southeast which remains to be excavated. Thus, in addition to the southern room with a crushed lime floor created by Wall 3017 in Square 6 and Wall 3043 in Square 5, there are at least two partially-exposed rooms, or perhaps one small room and a courtyard, lying to the north of Wall 3017 in Square 6 and another room presumably lying to the southeast of the entire square.


Figs. 7a-b. Excavation of painted wall plaster in Area DS-1 (left); small fragment with red and blue paint still in situ (right)

A probable whetstone was found lying flat on Wall 3017 in Square 6, perhaps on a "threshold" of sorts, but it is the objects found among the fragments of restorable pottery in the southwestern part of the square which are among the most interesting and unique items yet found by the renewed excavations at Tel Kabri. There were at least 40 fragments of painted wall and floor plaster in this area, almost all of which were found lying face down on top of the crushed lime floor (L. $3079=$ L. 3053) in this square. Most were removed as part of L. 3055 (Fig. 7a). One floor fragment has an incised line separating a dark blue or grey band of paint from the white paint elsewhere on the piece, while other floor fragments had a white, highly polished surface. Additional floor fragments were painted solid red. As for wall plaster, at least 10 pieces were painted with blue, some with a white image and black borders set against a blue
background. It is possible that most belong to the same figurative painting. Additional fragments were painted in red and yellow, some also against a blue background (Fig. 7b).

A definitive description and photographs of these remarkable pieces must await conservation; we anticipate that the first public presentation of these will be made at the 2009 ASOR meetings in New Orleans, where we are scheduled to give a paper on our 2005-2009 activities at Tel Kabri. However, we can already say at this time that these are, to date, the first wall paintings with blue background found either at Tel Kabri or in all of Israel. This unusual blue background or large solid blue fields is not typical of Cycladic wall paintings, nor is it common in Middle Kingdom or early New Kingdom Egypt, but is more frequently found in the approximately-contemporary Neopalatial frescoes at Knossos (e.g. The Sacred Grove and Dance, the Toreador fresco, the Ladies in Blue) and the Minoan bull-leaping fresco from Tell el Dab'a, as well as in later frescoes at Mycenae on the Greek mainland.

These new fragments not only add to the corpus of previously-known Aegean-style paintings at Tel Kabri but indicate that there was Knossian influence as well as Cycladic influence in these floor and wall paintings. Moreover, they may contribute to a resolution of the chronological question for these paintings, for the fragments - which form only a small portion of the original fresco -- can only have arrived at the secondary context in which they were found via human agency, such as being reused as temper in mudbricks which subsequently fell onto the crushed lime floor during the final destruction of the palace or being reused to patch the floor of the final palace (set face down into the floor, only the white back of the fragments would have been visible). As such, they would seem to support our previous suggestion (Cline and Yasur-Landau 2007) that the Aegean-style paintings adorned the penultimate palace of Kabri and were removed during the subsequent renovation phase which resulted in the final, undecorated, phase of the palace at the site.

## Area F

The excavations of Kempinski and Niemeier in the eastern part of the palace, named by them Area F, uncovered two major building phases. The MB I phase 4, with its neatly-built walls and plaster floor did not have the monumental character of the later palace, yet still possessed what seemed to be a well-planned structure (rooms 1569, 1586, 1705), more carefully built than the contemporary domestic structures in Area C. Kempinski therefore considered it to be part of a large pre-palatial structure. The nature of this structure, exposed again by us in the 2009 season, differed from the earliest, monumental MB I phases of the palace excavated by our team in Area DWE in the 2008 season.


Fig. 8. Final day photograph of Area F
The second major building phase encountered by Kempinski and Niemeier was phase 3 with its two sub-phases, in which large MB II walls (1510/1525, 1543), thick plaster floor, a possible court (1550), and installations composed of orthostats $(1517,1538)$ covered the earlier remains. However, the extent of the exposure did not allow for a clear understanding of the architecture of the area and its use. Because of the location of large building remains in what was hypothesized by Kempinski to be the central court of the palace, Area F was considered to be a temple, located -- in a manner similar to that at Alalakh -- in the palace's court, next to the ceremonial wing of the palace. Two wall stubs, 1509 and 1518 , were thought to
belong to the temple's fore-rooms.
Our aim in the 2009 season was to further study the earliest palace remains in this area; to connect Area F with our Area D-South excavated in 2005; and to further examine the temple hypothesis. We were successful in all of these aims/goals (Fig. 8).

For instance, our 2009 excavations have provided additional data on the nature of the area in the latest phase of the MB I period. East of the row of rooms 1569, 1586, and 1705, a thick well-laid white plaster floor was uncovered (L. 3096/98). It was constructed in several phases, which contributed to its strength and thickness, and included an installation or a posthole (L. 3078). A mudbrick wall (3086) was found under the level of this floor and thus may belong to an even earlier phase of the MB I. In addition, we once again uncovered Kempinski's Wall 1540, which appeared in the plan of his preliminary report but not in the final report for this area. This 2 meter wide wall makes a corner with Wall 1519 of the MB I period, and thus is a clear indication for the existence of MB I monumental architecture in the area, as well as providing strong support for a large early palace.

The understanding of the later, MB II, phases was much more difficult because of a very large Iron Age II pit (L. 1521) which penetrated both MB I and MB II levels. However, a key discovery for understanding the MB II architecture in the area is that the two installations composed of orthostats built on top of a rubble core ( $\mathrm{L} .1517,1538$ ) were found to be connected by the foundation of a wall running NW-SE (3110), and are thus possibly part of a single monumental structure. Floor 1550 abuts and slopes against the face of this foundation from the west. Wall 1525, running parallel to 3110 , may belong to the same period. In the east, L. 1517 was found by Kempinski and Niemeier in a corner formed by the monumental walls 1559 and 1510. New details for the plan of this large hall were discovered this year, when -- in the west -- orthostat installation 1538 was found to be laid against the newly discovered NWSE monumental wall 3108. So far the only entrance to this large room was from the north-west, west of Wall 1559.


Fig. 9. Mudbrick collapse visible in Area F
East of this large room, additional walls and massive collapse hint at the existence of yet another MB II large hall. Kempinski's two wall stubs, 1509 and 1518, were found by us to belong to a much more substantial wall complex, a very large L-shaped corner composed of NW-SE Walls 3070 and 3080 (possibly a single 4 meter wide wall) and Wall 3112, a narrower NE-SW wall. Floor 3080, a plaster floor with a stone and pottery makeup, abuts this corner from the west. These cannot be "temple curtain walls" as hypothesized by Kempinski.

Moreover, so-called "floors" (L. 1579, 1507) identified by the previous excavations were found instead to be the top of a heavy mudbrick collapse with a high content of plaster and limestone, lying partially on top of these walls and thus obscuring them. East of these walls, the heavy mudbrick collapse slopes down from east to west and from north to south (Fig. 9). This collapse hints at the existence of very large walls in the unexcavated area to the east. An additional, well laid, 10 cm thick plaster floor (3076) belonging to this phase and possibly to the same large space extends from Wall 3108 north to Wall 3112

Two Iron Age II feature are cut into the MB II levels in this area: a massive stone tumble at the the bottom of a pit (L. 3106) and a 1.25 m thick wall (3090).

## A Note on Sampling

The excavation of a large variety of contexts inside the palace, including rooms, inner courts, and possible storage areas, as well as structures and an open court immediately outside the palace, provided us with a unique opportunity to gain insights on the Canaanite palace economy through a combination of zooarchaeology, residue analysis, and pottery provenance studies.

The sampling of zooarchaeological remains was carried out by Yehonatan Goldman of the University of Haifa. Samples for wet sieving (Fig. 10a) were taken from accumulations above each surface, using a fine grid system to allow for the documentation of the exact location and volume of each sample.


Figs. 10a-b. Wet-sieving for zooarchaeological remains (left) and sampling for residue analysis (right)

Samples for residue analysis were taken primarily from the restorable vessels in the "corridor" area by both Andrew Koh of Tufts University and Kristine Merriman of Oxford University, focusing in both cases on samples from the interior of bases of closed vessels (Fig. 10b). The same vessels were also sampled for petrographical thin section analysis by David Ben Shlomo of The Hebrew University of Jerusalem. It is hoped that the combination of provenance and contents can give us insights into the movements of goods within the Kabri polity and the Kabri palace. The results of this provenance study will then be compared to a previous study conducted by Ben Shlomo on the pottery from the Kabri regional survey of 2006, which yielded imported results on the development of pottery production centers in the western Galilee before and after the rise of the Kabri polity.

## Future Goals and Aims

In future seasons at Tel Kabri, we will continue to investigate the buildings and features found in Areas D-West, D-South, and F. In addition, we will reopen Area D-North, first excavated in 2005, with the goal of connecting this area to D -West on its western edge as well as expanding the area to the east in order to find the eastern closing wall of the palace. Our investigations will continue to include an emphasis on interdisciplinary studies which will allow us to shed additional light on the rise of rulership in the Canaanite kingdom of Kabri and its international connections to the Aegean and elsewhere during the Middle Bronze Age.

## References

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