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Further Aspects of the Middle Bronze Age II Fortifications in Palestine

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# Further Aspects of the Middle Bronze Age II Fortifications in Palestine\*

by Jacob Kaplan

## A. The Earth Rampart and the Glacis

Among the defence constructions of the Middle Bronze Age II in Palestine the most interesting are the earth rampart and the glacis which are found in varying combinations in most of the fortifications of this period. Interest in these constructions has not abated since they were first discovered by FLINDERS PETRIE at *Tell el-Yahūdīye*; indeed, they were destined to become one of the moot problems of Near Eastern archaeology. Lately there have been some important developments in their study, and at the same time the accepted theories have been subjected to searching criticism<sup>1</sup>. In what follows we intend to analyse the data accumulated so far, and try to arrive at a method which will enable one to classify less ambiguously the fortifications of the MB II period.

At the outset, it is worth emphasizing that from the typological viewpoint two kinds of earth rampart may be distinguished: the rampart attached to a wall, hereunder named "wall rampart"; and the rampart not attached to any wall, to be called "free-standing rampart"<sup>2</sup>. We shall also try to give a more precise definition to the term "glacis" which is often confused with "earth rampart", and thus apt to produce misleading interpretations of archaeological findings<sup>3</sup>.

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<sup>1</sup> The contribution of the late Prof. W. F. ALBRIGHT to the study of the rampart enclosures and the glacis is too well-known to need detailing here. An account of his attempts to elucidate the origin and function of these constructions and their connection with the Middle Bronze II in Palestine may be read in WRIGHT's article, "Iran and the Glacis," listed below. In this connection, see also Y. YADIN, *Hyksos Fortifications and the Battering Ram*, BASOR 137 (1955) pp. 23–32; G. H. R. WRIGHT, *Tell el-Yehūdīyah and the Glacis*, ZDPV 84 (1968) pp. 1–17; idem, *Iran and the Glacis*, op. cit. 85 (1969) pp. 24–34; P. J. PARR, *The Origin of the Rampart Fortifications of Middle Bronze Age Palestine and Syria*, ZDPV 84 (1968) pp. 18–45, and recently the articles by G. ERNEST WRIGHT, *The Archaeology of Palestine from the Neolithic through the Middle Bronze Age*, Journal of the American Oriental Society 91 (1971) pp. (276–293) 288 ff. and P. MARRASSINI, *Sui "campi fortificati" nell'età di Mari*, Oriens Antiquus 10 (1971) pp. 107–122.

<sup>2</sup> The distinction drawn here between the wall rampart and freestanding rampart is not new; others have used the term "freestanding rampart" to designate the ramparts of "fortified enclosures", while "wall rampart" was inadvertently assimilated to the term "glacis" or just "rampart", see PARR, op. cit. pp. 41–42.

<sup>3</sup> In fact, in PARR's article the terms "rampart" and "glacis" are used indiscriminately

### a. Wall Rampart

Basically, the wall rampart is a girdle of earth deposited in front of the wall, its object being to protect the wall against the action of natural forces and enemy attempts to undermine it. In cross-section, the wall rampart is generally a right-angled triangle (Fig. 1). The wall was one of the earliest means of defence<sup>4</sup>; and it is a fair assumption that the wall rampart also appeared as early as the wall.

### b. Freestanding Rampart

We shall first seek to clarify what an earth rampart or embankment is from the technological viewpoint, and then inquire into the possible circumstances which led to its appearance as a military construction. An embankment is usually the by-product of canal-digging: the spoil, during excavation, would be thrown haphazardly to one or both sides of the canal, and so constitute a nuisance or worse to the owner of the field. To overcome this drawback, one started to pile up the spoil along the canal in form of a levee. In time, the levee was exploited to raise the level of water in the canal, to prevent flooding, to divert water to the fields, etc. Ideally, the cross-section of a levee is an isosceles triangle with a cut apex, the slope of its sides depending on the type of earth from which it is formed; with heavy earth there is less tendency for the sides to slip. What first gave man the idea of digging canals and building embankments? Probably this happened when he became aware that the parched lands of the great river plains could be irrigated by diverting water from the river into canals and thence into the fields. Any country with an irrigation culture thus presents a landscape criss-crossed with canals and embankments, which have to be kept in repair as a matter of routine. Not surprisingly, therefore, we find in an ancient Sumerian text that the farmer is called "man of the dyke and canal"<sup>5</sup>.

It may be noted that wherever one had a network of canals, the levelled tops of the levees were used for the passage of humans and animals, and quite often these were the only roadways. However, from the beginning the levee also served another and hardly less important function: an essential device in man's food production, it also enabled him to protect his crops from depredation by outsiders. Since it was raised above the surrounding countryside, the levee was the ideal place from which defenders could spy out a potential enemy and get advance warning of his intentions. Nor was this all; in an emergency it was easy to block the narrow paths of the levees, while the defenders on top had the advantage over any enemy troops who, encumbered by their weapons, would try to clamber up the slope. One may thus conclude that the military earth rampart originated with the embankments of the ancient irrigation networks.

throughout. On the other hand, Y. YADIN for the western rampart at Hazor employs the term "wall"; see *Excavations at Hazor*, 1958. Preliminary Communiqué, IEJ 9 (1959) p. (74—88) 84.

<sup>4</sup> The wall was known in Palestine already in the preceramic Neolithic period, see KATHLEEN M. KENYON, *Digging up Jericho* (London 1957) pp. 66 ff. For its presence in the Chalcolithic Age, see J. KAPLAN, *Excavations at Wadi Rabah*, IEJ 8 (1958) p. (149—160) 153, Fig. 3.

<sup>5</sup> H. FRANKFORT, H. A. FRANKFORT, J. A. WILSON and T. JACOBSEN, *Before Philosophy* (Harmondsworth 1963) p. 81.

## c. Glacis

The glacis is a sloping construction designed from the start for a definite military purpose: to serve as an obstacle which placed the enemy at a definite topographical disadvantage<sup>6</sup>. We saw before that the natural slope of the rampart is, in fact, nothing but a glacis, even where the builders did not deliberately aim for this. If this is so, when therefore may the slope of a rampart or indeed of any escarpment be called a glacis? The term "glacis", it seems, should be applied to any rampart slope or other escarpment, including the slope of a tell, which has been specially built or consolidated to serve as a military obstacle<sup>7</sup>. It follows that the glacis is not necessarily connected with a rampart, but should be seen as an independent fortification element. Thus the terms "rampart" and "glacis" are not interchangeable.

## d. Examples of MB II Fortifications

So far we have attempted to define more closely than customary the main elements of MB II fortifications: the wall, wall rampart, freestanding rampart and glacis. With this in mind, it may be worth-while to examine a number of these fortifications excavated at various sites in Palestine. It should be stressed that the following reflects the author's viewpoint only and not those of the excavators.

1. *Tel Pôlēg — Wall Rampart*. This wall rampart fortification was excavated by R. GOPHNA in *Naḥal Pôlēg (Wādī Fāliq)* (Fig. 1)<sup>8</sup>. At the western side of the hill a section of mud-brick wall, 5 metres thick, was exposed. Joined to its outer face was a rampart (i. e. a wall rampart) constructed of successive layers of crushed *kurkār* (calcareous sandstone of the coastal plain). However, due to lack of details, it is impossible to know how these layers were applied and whether there was any sort of coating on the outer slope of this wall rampart. The structure is assigned to MB IIA.

2. *Tel Gərisā (Tell Geriše) — Glacis Attached to Base of Wall*. This fortification was excavated by E. L. SUKENIK and others (Fig. 2)<sup>9</sup>. The wall, 3 metres thick, is constructed of mud-bricks and runs along the upper perimeter of the natural *kurkār* hill that rises above the surrounding area. Because of the looseness of the earth which composes the slope, consolidation works were undertaken in the MB II period which eventually produced a perfect glacis. The glacis is formed of layers of rammed earth laid on the scarp, alternating with layers of mud-bricks, the top layer being crushed *kurkār*. The glacis begins slightly above the wall-base and from there slopes down to the bottom of the hill.

3. *Hazor — Freestanding Rampart*. An example of an ordinary freestanding rampart is the west rampart at Hazor, excavated by Y. YADIN and others (Fig. 3)<sup>10</sup>. This freestanding rampart is on the flat ground that slopes gently from east to west. The

<sup>6</sup> On what "glacis" originally implied see KENYON, op. cit. (above, n. 4) pp. 220–221 and G. H. R. WRIGHT, op. cit. (1968) (above, n. 1) p. 1.

<sup>7</sup> Cf. Y. YADIN's description of the north and east slopes of the Hazor enclosure; see Y. YADIN et al., *Hazor I* (Jerusalem 1958) p. 75.

<sup>8</sup> R. GOPHNA, *Tel Poleg*, RB 72 (1965) pp. 552–553.

<sup>9</sup> *Tel Gərisā*, *Encyclopedia of Archaeological Excavations in the Holy Land* (Jerusalem 1970) (Hebrew) [hereunder "Encyclopedia"] pp. 576–578.

<sup>10</sup> *Hazor I*, p. 75.

section cut in the rampart was never completed, and it is thus impossible to know what types of soil formed its inner part and how the layers were applied. YADIN believes the rampart was constructed of a mixture of clayey soil and pebbles taken from the trench excavated beyond its western edge. Since there were no indications of any lime mortar or stone lining on its outer slope, it may be presumed that the mixture of earth and pebbles was consolidated and smoothed on the surface, thus creating a possible glacis.

4. *Tēl Nāgîlā (Tell en-Naḡîle) — Freestanding Rampart, Wall and Glacis.* This fortification was excavated by RUTH AMIRAN and A. EITAN (Fig. 4)<sup>11</sup>. In the first stage a freestanding earth rampart was erected on the crest of the natural hill, and some time after a mud-brick wall was built into the inner slope of the rampart and the gap between it and the wall filled with limestone chippings, *kurkār* and earth. Finally, the same combination of materials was laid on the outer rampart slope and on the hill-scarp, thus producing a glacis.

5. *Yavnē-Yām (Mīnet Rūbīn) — Freestanding Rampart and Glacis.* In addition to the short communiqués published so far on the excavations at *Yavnē-Yām*<sup>12</sup>, we present below some further details on this site, together with a cross-section of its freestanding rampart.

At *Yavnē-Yām*, an ancient site on the Mediterranean coast about 1 km. south of *Qibbûs Palmāhīm*, were found the remains of a square enclosure bounded by free-standing ramparts. More than half of the enclosure has been eroded away due to the slowly rising sea level which has continued since Pleistocene. However, the entire east rampart and also parts of the north and south ramparts are preserved. The length of the preserved east rampart is 800 metres, and it is thus reasonable to assume that the area of the enclosure measured 800 x 800 metres, i. e. 640 dunams. There were no occupation traces within the open enclosure area, but in a narrow strip along the inner rampart slope were found building remains and graves. Occupation remains were also found at the small *tell* on the great promontory of *Yavnē-Yām*<sup>13</sup>. The excavations at the

<sup>11</sup> RUTH AMIRAN and A. EITAN, A Canaanite-Hyksos City at Tell Nagila, *Archaeology* 18 (1965) p. (113—123) 118.

<sup>12</sup> J. KAPLAN, Yavne-Yam, *IEJ* 19 (1969) pp. 120—121; id., Yavneh-Yam, *RB* 77 (1970) pp. 388—389.

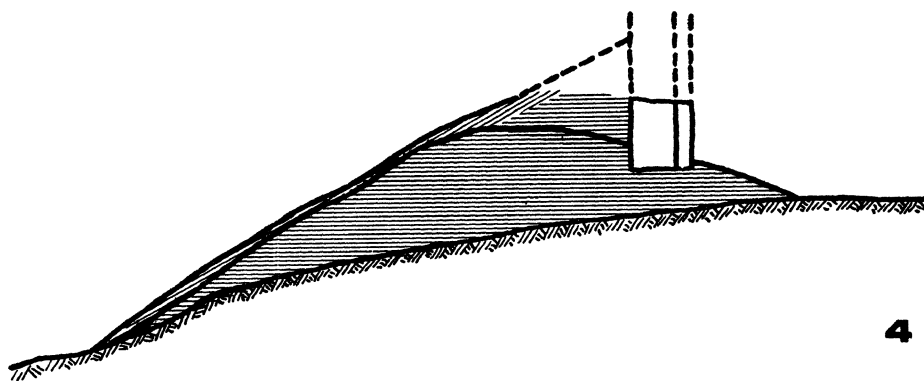
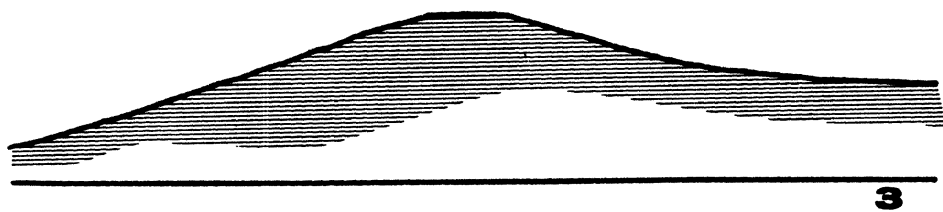
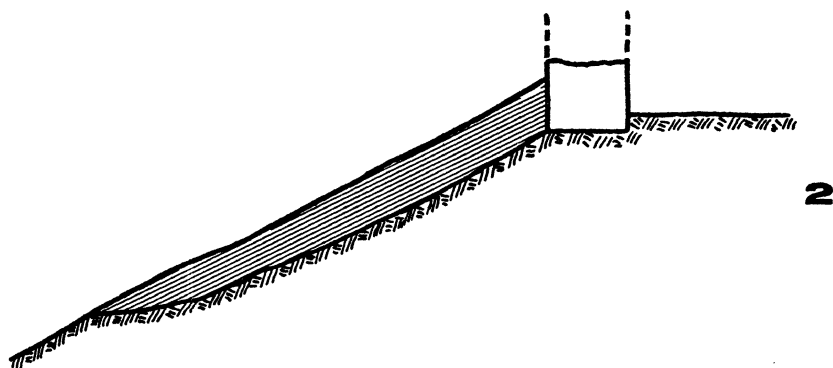
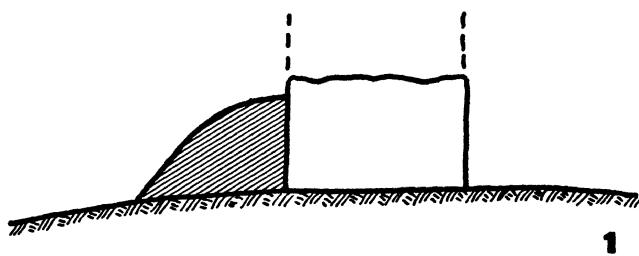
<sup>13</sup> The area around the cliff was examined in the early fifties by M. DOTHAN; see An Archaeological Survey of the Lower Rubin River, *IEJ* 2 (1952) p. (104—117) 108. However, in this survey no attention was paid to the earth ramparts, as they were thought to be the sand dune-covered walls of the Roman-Byzantine town (*ibid.* pp. 113 ff.).

Fig. 1. Schematic Section of Eastern Fortifications at *Tēl Pôlēg* (from R. GOPHNA, *Encyclopedia*, p. 601)

Fig. 2. Schematic Section of Eastern Fortifications at *Tēl Gārīsā* (from N. AVIGAD, *Encyclopedia*, p. 577)

Fig. 3. Schematic Section of Eastern Fortifications at Hazor (from Y. YADIN et al., *Hazor I*, Pl. CLXXIX)

Fig. 4. Schematic Section of Northern Fortifications at *Tēl Nāgîlā* (from R. AMIRAN and A. EITAN, *Archaeology* 18, Fig. 11)



rampart, conducted intermittently by the author during June 1966 — February 1969, were intended to study the methods of its construction and the materials used. To this end a vertical cut, passing from the top of the rampart down to its base, was made in its northern segment — Area A (Fig. 5). Later, excavations were extended to the southern half of the east rampart — Area H — where a series of three gates, one on top of the other was uncovered (see below, n. 34). The method of the rampart's construction was as follows: first, the whitish sand which covered the virgin soil along the future alignment of the rampart was levelled, then a layer of *ḥamrā* (red clay soil of the coastal plain), 12 cm. thick was put down as a bedding for the rampart core. This core was constructed of light-brown, rammed earth, which in the final stage was cased by a sheath of *ḥamrā*, built up from the base on both sides of the core towards its top.

The glacis is made up of two layers: the lower, of heavy clay soil approx. 60–70 cm. thick, extends from the top of the rampart down to virgin soil. A second, a covering layer of crushed *kurkār* 50 cm. thick, was probably intended to stop the damp clay soil underneath from desiccating and pulverizing. The rampart and glacis date to MB IIA, i. e. 2000–1800 B. C.<sup>14</sup> No traces of walls were observed. About the end of the 16th century B. C., the enclosure was reoccupied, its ramparts mended, and a new rubble-stone glacis laid over the old glacis. The new glacis was constructed in two parts: the lower, about 3.0 metres high, was in the form of a retaining wall inclined circa 45° from the horizontal, while the part from there up to the rampart top, raked at approx. 30°, was stone paved.

6. *Jericho — Freestanding Rampart, Glacis and Wall.* This fortification was excavated by KATHLEEN KENYON. The section cut in the western part of the tell, as well as the soundings made in other areas of the site, provide a fair insight into the details of construction of these defences (Fig. 6)<sup>15</sup>.

On the ruined slope of the EB mound an asymmetric freestanding rampart was erected. This stage in the construction of the fortification was called by KENYON “first bank”; it was finished by an outer coat of plaster held down by a system of peg-like projections. The two layers on top of the plastered outer surface of the first bank were called respectively “second bank” and “third bank”. The second bank was also plastered on its surface but with a less solid plaster; at its foot were some stones, perhaps the remains of a low revetment wall, that was built to counteract the extra steepness of the bank. The third bank was revetted at its lower part by a solid stone wall raised on the bedrock.

In the light of the data from *Yavnē-Yām*, it may be suggested that there were two stages in the history of the earthwork defences at Jericho, the early stage being the free-standing rampart and its glacis, KENYON's “first” and “second bank”<sup>16</sup>, while the later stage includes a second glacis, i. e. KENYON's “third bank” with its revetment stone wall. The date of this glacis is probably as late as the revetted glacis at *Yavnē-Yām*;

<sup>14</sup> For these dates, see J. KAPLAN, *Mesopotamian Elements in the Middle Bronze II Culture of Palestine*, JNES 30 (1971) p. (293–307) 307.

<sup>15</sup> KATHLEEN M. KENYON, *Archaeology in the Holy Land* (London 1970<sup>3</sup>) pp. 177–179, Fig. 43.

<sup>16</sup> Of course, the coats of plaster on the rampart slope and glacis at Jericho may be viewed as an independent glacis, according to our definition. However, the assumption is more feasible that these coats of plaster were meant to provide a water-tight lining for the rampart and glacis.

that is, approximately the end of the 16th century B. C. It may thus be assumed that on its upper part this glacis was also paved with stones which later were probably stripped, and that there was no plaster facing, as suggested by KENYON<sup>17</sup>. It is not easy to determine when the brick wall at the top of the freestanding rampart was constructed; the data from *Tēl Nāgīlā* suggest that this was some time after the first glacis was erected.

7. *Tēl Dān (Tell el-Qādī) — Freestanding Rampart or City Wall.* At *Tēl Dān*, A. BIRAN uncovered fortifications which girdled the entire city. It has always been thought that these fortifications were "Hyksos ramparts" and BIRAN's excavations seem, at first glance, to confirm this opinion. But on further examination, matters appear less simple. The rampart lacks the usual terre pisée core, instead of which there is a rubble-stone wall 6.50 metres thick (Fig. 7)<sup>18</sup>. According to BIRAN this core of stone is a basic part of the rampart and served to support the earth piled up against either side of it. On the whole, this would lead one to believe that the construction at *Tēl Dān* is really a freestanding earth rampart. However, it is preferable to view this fortification not as a freestanding rampart but as a wall, the reason for the two attached banks being found in the planned height of this wall. The height of a freestanding wall, as we know, is a function of the width of its base. Whenever this type of wall is raised beyond the permissible ratio between its height and base-width, its lower part must be widened from the base upward to a certain level. This may be done by piling up banks of earth on either side of the wall, as happened, in our opinion, at *Tēl Dān*<sup>19</sup>; or by adding revetment walls on either side of the wall and so widening its base; or by a stepped broadening of the wallbase, as seems to have been the case with the defence structure uncovered in 1965 at Hazor<sup>20</sup>.

In this connection, two further walls with attached earth banks on either side may be mentioned. One of these is at *ʿĀšdōd-Yām (Mīnet el-Qalʿa)*, and the other at Dura Europos<sup>21</sup>. Although both constructions date much later than Middle Bronze — one to the Iron Age and the other to the Roman period — they may help us to understand the various circumstances which may have led to these constructions.

<sup>17</sup> KENYON, op. cit. (above, n. 15) pp. 178–179.

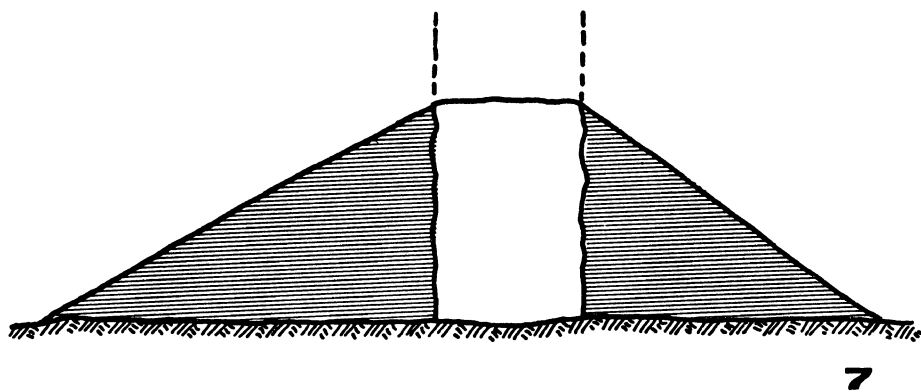
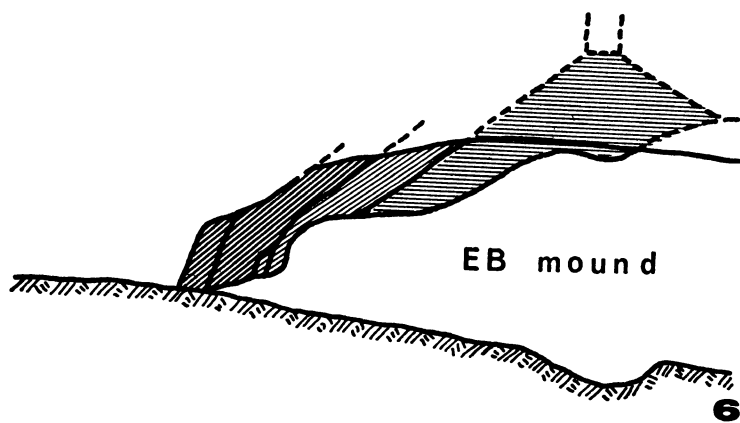
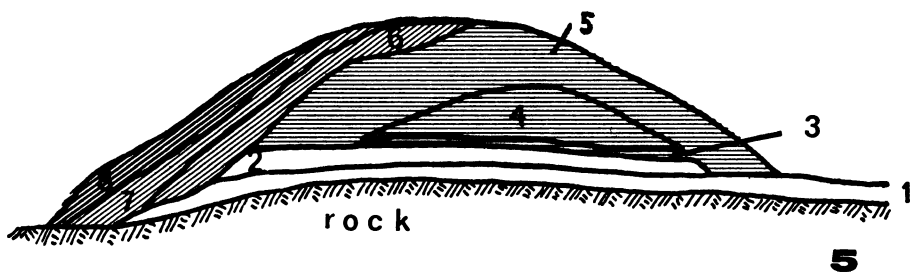
<sup>18</sup> A. BIRAN, *Tel Dan*, IEJ 16 (1966) pp. 144–145.

<sup>19</sup> Dr. BIRAN, in a recent conversation, told the author that during the excavations were found signs indicating that the attached ramparts on either side of the wall were constructed at the same time as the "core". In his opinion this proves that the structure is nothing but a rampart. Yet his proof is not conclusive, for the wall and the rampart might just as easily have been erected simultaneously, to provide the necessary mass for a firm wall-base.

<sup>20</sup> Y. YADIN, *The Fifth Season of Excavations at Hazor, 1968–1969*, *The Biblical Archaeologist* 32 (1969) pp. (50–71) 61–62. It may be worthwhile to look more closely at YADIN's statement about the function of the rampart: viz. that it was a defensive device against the battering ram (ibid. pp. 62–63). This could hardly apply to the freestanding rampart (without a wall on top), if one is meant here, for no battering ram is capable of penetrating it. But in any case, there was no need to penetrate this rampart, since the absence of arrestor obstacles on its crest made it possible for the enemy to storm it, provided he mustered enough troops. The situation was different with regard to the wall rampart and stone revetment which were designed to protect the wall. This would force the enemy to build siege platforms if he wanted to strike at the defenders up in the wall turrets.

<sup>21</sup> J. KAPLAN, *The Stronghold of Yamani at Ashdod-Yam*, IEJ 19 (1969) pp. (137–149) 140ff.; a similar fortification was discovered at Dura Europos, though in a different





## e. Origin of the Freestanding Rampart of Palestine

In a recent paper, the author indicated the possibility that the square earth rampart enclosure originated in Mesopotamia during the Ur III dynasty<sup>22</sup>. It seems fitting in the light of our discussion of the two types of ramparts, to amplify this point. Examination of the earth rampart remains in Palestine shows that the wall rampart was most widespread in the Early Bronze Age as, for instance, at *Tell el-Fār'a*, *Tell Ta'annek*, *et-Tell* (Ai), *Tēl Gat* (*Tell Šēḫ Ahmed el-'Arēnī*) and other sites<sup>23</sup>. This is not surprising, as the Early Bronze Age saw the beginning of the building of cities surrounded by wall defences. During Middle Bronze I the building culture of Palestine was extremely meagre and, as far as is known, no remains of any wall — or freestanding ramparts of this period have been found here<sup>24</sup>. The wall rampart is found again in Middle Bronze IIA, probably when the building of city walls was resumed. By contrast, no remains of freestanding ramparts prior to MB IIA have yet been discovered; hence the appearance of the freestanding rampart is linked by us with the beginning of the spread of the Amorite tribes throughout Syria and Palestine. Our theory is that the Amorites were the first to build earth rampart enclosures which in plan resemble Roman military encampments<sup>25</sup>, and that these fortifications were inspired by similar fortifications in Mesopotamia. We refer particularly to the defence line of Shu-Sîn, king of Ur (2038–2030 B. C.), which extended approx. 275 km. and was known as *Murīq Tidnim*, that is “keeping away Tidnum” (Amorites)<sup>26</sup>. BOTTÉRO, who applies the term “rampart” to this

context. For a long time the city was surrounded by a mud-brick wall, and only on the eve of the Persian-Sassanian invasion (c. 260 A.D.) were the circuit walls strengthened and a wall rampart added on either side of the west wall (the famous Dura Europos synagogue was excavated beneath this inner rampart); see CARL H. KRAELING et al., *The Excavation at Dura-Europos VIII 1* (New Haven 1956) Pl. IV.

<sup>22</sup> KAPLAN, op. cit. (above, n. 14) pp. 305–306. It should be added that rampart enclosures are mentioned in 17th century B.C. Mesopotamian documents; see W. F. ALBRIGHT, *The Archaeology of Palestine* (Harmondsworth 1949) p. 86.

<sup>23</sup> PARR, op. cit. (above n. 1) pp. 31–32.

<sup>24</sup> On the impoverished building culture of this period, see, for instance, KATHLEEN M. KENYON, *Amorites and Canaanites* (London 1966) p. 9.

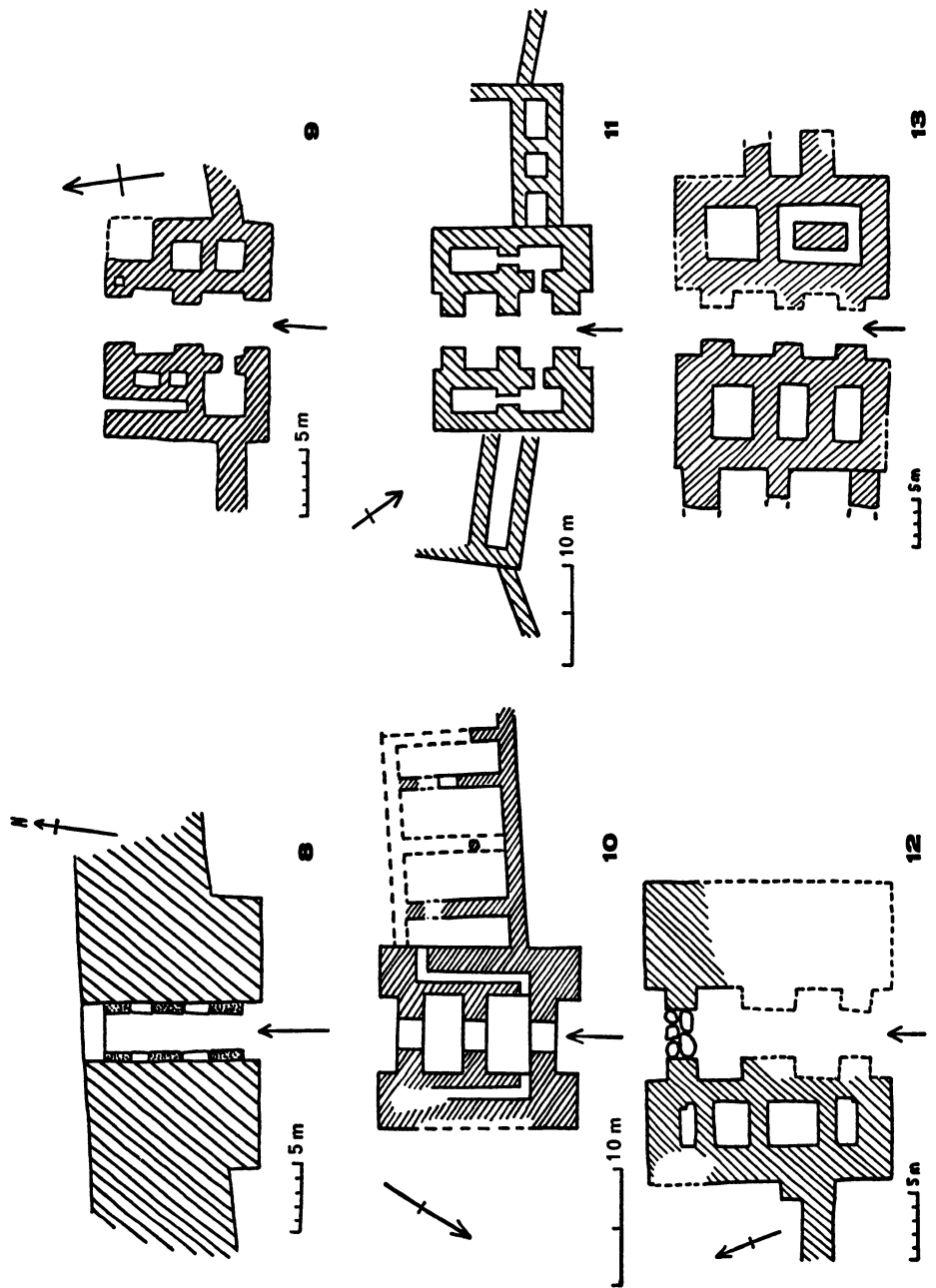
<sup>25</sup> On the square encampments established by migrating tribes in quest of new lands, see A. L. OPPENHEIM, *Ancient Mesopotamia* (Chicago-London 1964) p. 134. On the similarity between the rampart enclosures and Roman military encampments, see KENYON, op. cit. p. 70.

<sup>26</sup> C. J. GADD, *Babylonia c. 2120–1800 B.C.*, *Cambridge Ancient History I* (Revised Edition), Fascicle 28 (1965) p. 17.

Fig. 5. Schematic Section of Northern Fortification at *Yavnē-Yām* (from the author's field drawings): 1. Light-brown virgin soil. 2. Whitish sand. 3. *Hamrā* bedding. 4. Light-brown rammed earth core. 5. Sheath of *hamrā*. 6. Heavy clay glacis. 7. Crushed *kurkār* cover. 8. Rubblestone glacis

Fig. 6. Schematic Section of Western Fortifications at Jericho (from K. M. KENYON, *Archaeology in the Holy Land*, Fig. 43)

Fig. 7. Schematic Section of Southern Fortifications at *Tēl Dān* (from A. BIRAN, *IEJ* 16, pp. 144–145)



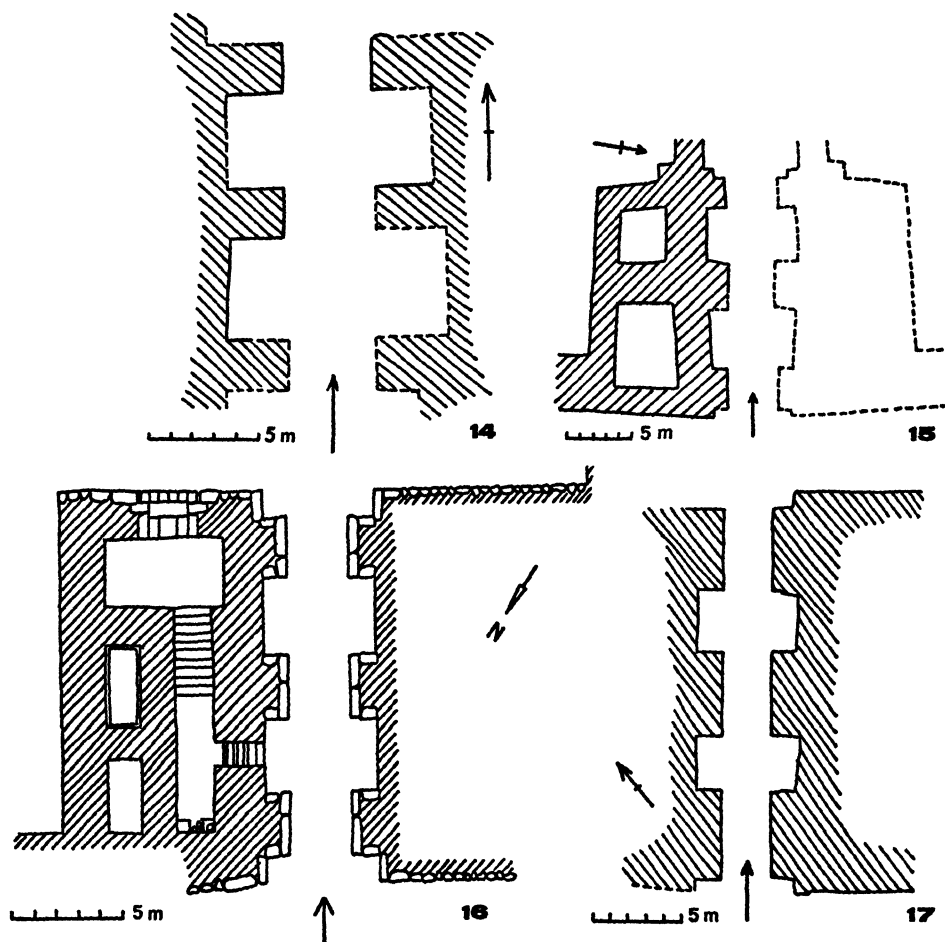


Fig. 8. Plan of Southern Gate at Gezer (from R. A. S. MACALISTER, *Gezer II*, Fig. 125)

Fig. 9. Plan of Northern Gate at Beth Shemesh (from D. MACKENZIE, *PEF Annual II*, Pl. III)

Fig. 10. Plan of Northwest Gate at Shechem (from G. E. WRIGHT, *Shechem*, Fig. 9)

Fig. 11. Plan of Northeast Gate at Hazor (from Y. YADIN, *Encyclopedia*, p. 163)

Fig. 12. Plan of Southern Gate at *Tell el-Fār'a* (from E. MACDONALD et al., *Beth Pelet II*, Pl. XVII)

Fig. 13. Plan of Eastern Gate at *Yavnē-Yām*, Area H (from the author's field drawings)

Fig. 14. Plan of Western Gate at Qatna (from R. DU MESNIL DU BUISSON, *Syria VII*, Fig. 1)

Fig. 15. Plan of Southern Gate at Carchemish (from C. L. WOOLLEY et al., *Carchemish II*, Pl. 18)

Fig. 16. Plan of Northwest Gate at Alalakh (from C. L. WOOLLEY, *Alalakh*, Fig. 55)

Fig. 17. Plan of Southwest Gate at *Tell Mardīḥ* (from G. CASTELLINO et al., *Missione Archeologica Italiana in Siria 1965*, Fig. 2)

fortification, states that eventually it came to be called "the Amorite city"<sup>27</sup>: the word "city" may here perhaps be interpreted as "enclosure". In the light of our discussion of the history of the freestanding rampart, we may fairly suppose that the builders of the *Murîq Tidnim* did not newly construct it from beginning to end but probably utilized parts of the existing levees of the main irrigation canals and only added the needed links between them to complete their continuous defence line.

The *Murîq Tidnim* and "the Amorite City" of the documents testify to the connection between the Amorites and the rampart, which was a fortification element of the Ur III period. Hence, these documents are of primary importance for the study of the spread of the earth enclosures in Palestine, which appeared there from the end of the 3rd mill. B. C. onwards.

## B. The Gates

At most of the fortified MB II cities excavated in Palestine the entrance way to the city has been uncovered. This is invariably a gate with three pairs of piers, built one behind the other. This type of gate is known as a "triple gate" or "three way gate". Such gates have been excavated at Gezer (Fig. 8)<sup>28</sup>, Beth Shemesh (Fig. 9)<sup>29</sup>, Shechem (Fig. 10)<sup>30</sup>, *Tell Bêt Mirsim*<sup>31</sup>, Hazor (Fig. 11)<sup>32</sup>, *Tell el-Fār'a* (Fig. 12)<sup>33</sup>, and at *Yavnē-Yām* (Fig. 13)<sup>34</sup>. Triple gates were also found in Syria at Qatna (Fig. 14)<sup>35</sup>, Carchemish (Fig. 15)<sup>36</sup>, Alalakh (Fig. 16)<sup>37</sup>, and recently also at *Tell Mardīḥ* (Fig. 17)<sup>38</sup> — all dating MB II.

<sup>27</sup> G. POSENER, J. BOTTERO and KATHLEEN M. KENYON, Syria and Palestine c. 2160—1780 B.C., *ibid.*, Fascicle 29 (1965) p. 33.

<sup>28</sup> R. A. S. MACALISTER, The Excavation of Gezer II (London 1912) pp. 240 ff., Fig. 125; WILLIAM G. DEVER et al., Further Excavations at Gezer 1967—1971, *The Biblical Archaeologist* 34 (1971) p. (94—132) 102.

<sup>29</sup> D. MACKENZIE, Excavations at Ein Shems, PEF Annual II (1912—1913) Pl. III; G. ERNEST WRIGHT, Beth Shemesh, *Encyclopedia*, p. (79—82) 79.

<sup>30</sup> E. SELLIN, Die Ausgrabung von Sichem, ZDPV 49 (1926) Pl. 33; G. ERNEST WRIGHT, Shechem: The Biography of a Biblical City (New York 1965) p. 51, Fig. 9.

<sup>31</sup> W. F. ALBRIGHT, The Excavation of Tell Beit Mirsim II, AASOR XVII (1938) pp. 30—31.

<sup>32</sup> Y. YADIN, Excavations of Hazor, 1958: Preliminary Communiqué, IEJ 9 (1959) pp. (74—88) 85 ff. A sketch-plan of this gate is found in *Encyclopedia*, p. 163. An additional "triple" gate was excavated during the 1968—1969 season in Area P; *op. cit.* (above, n. 20) pp. 60 ff.

<sup>33</sup> E. MACDONALD et al., Beth Pelet II (London 1932) p. 29, Pl. LXXVII.

<sup>34</sup> In Area H were excavated three gates, one on top of the other. The lowest is a "triple" gate, and the middle one a "double" gate. The most recent, which is not connected with the two below it, was a kind of guard-post at the outskirts of the LB II city.

<sup>35</sup> In fact, at Qatna were excavated two triple gates, the first, ashlar-built, at the western side of the enclosure, and the second at its eastern side; see R. DU MESNIL DU BUISSON, Les ruines d'el Mishrifé, Syria 7 (1926) pp. (289—325) 294 ff., Fig. 1; *id.*, L'ancienne Qatna ou les ruines d'el-Mishrifé au N.-E. de Homs (Émèse): Deuxième campagne de fouilles, 1927, Syria 8 (1927) pp. (277—301) 279 ff., Pl. LX.

<sup>36</sup> C. L. WOOLLEY et al., Carchemish II (London 1921) pp. 103 ff.

<sup>37</sup> C. L. WOOLLEY, Alalakh (Oxford 1955) pp. 145 ff., Fig. 55. It is worth noting that WOOLLEY dates the gates at Carchemish and Alalakh to the same period; see C. L. WOOLLEY, A Forgotten Kingdom (Harmondsworth 1953) p. 70.

<sup>38</sup> G. CASTELLINO et al., Missione Archeologica Italiana in Siria 1965 (Roma 1966) pp. 19 ff.

Apart from the triple gate, one also finds the double gate; that is, a gate with two pairs of piers. This type, however, is not common in Palestine, though known at Shechem, Megiddo and *Tel Pôlēg*<sup>39</sup>. It is also found in Syria, for instance at Mari<sup>40</sup>. It is worth noting that ALBRIGHT links these two types of gate together<sup>41</sup>, although their origins and local developments are different. The double gate is very early in Palestine, while the triple gate appears much later. At En-Gedi two double gates were found in the sacred enclosure of the Chalcolithic period<sup>42</sup>, while no gates of this type are known in either the Early Bronze Age or the Middle Bronze I period. A different development occurred in Mesopotamia where the double gate, as mentioned (n. 42), is found in levels from the *el-'Ubēd* period onwards. In Palestine this gate reappears in Middle Bronze II and continues to the Late Bronze period<sup>43</sup>.

So far no evidence for the existence prior to MB II of the triple gate in Syria and Palestine has been found; also in Mesopotamia apparently the beginning of this gate in its characteristic form dates fairly late, i. e. the period of Ur III (see below). At any rate, no remains of triple gates prior to Ur III have been found thus far in Mesopotamia<sup>44</sup>. The best known example of a triple gate in Mesopotamia is the one excavated by WOOLLEY at the sacred enclosure of Ur. It served as the main entrance to the Court of Nannar which had been built up against the west wall of the Ziggurat Terrace (Fig. 18a). The enclosure had been erected by Urnammu, founder of the Ur III dynasty (2113–2096 B. C.) while the Court of Nannar was erected by his son Shulgi (2096–2048 B. C.)<sup>45</sup>. The gate has two towers which project from the front wall of the courtyard;

<sup>39</sup> WRIGHT, *op. cit.* (above, n. 30) pp. 71 ff. Also R. GOPHNA, *op. cit.* (above, n. 8) p. 601. Probably the gates of *Tel Pôlēg* had an indirect entrance, like the "double" gate at Megiddo which also dates MB II A; cf. G. LOUD, *Megiddo II*, OIP LXII (Chicago 1948) p. 3, Figs. 6–8.

<sup>40</sup> A. PARROT, *Mission archéologique de Mari II. Le palais. Architecture*, BAH LXVIII (Paris 1958) Pls. III, XI.

<sup>41</sup> ALBRIGHT, *op. cit.* (above, n. 22) p. 89.

<sup>42</sup> B. MAZAR, *Encyclopedia*, p. 446. The gates of the Chalcolithic enclosure at En-Gedi are most interesting, as they exhibit architectural elements which probably originated in Mesopotamia. At these two gates the ends of the walls and the door-posts were strengthened; at the north gate the wall-ends were thickened while at the east gate small reinforcement walls were run up along the door-posts. These methods of strengthening the wall-ends of gates are known in early Mesopotamia, as e.g., is attested by the plans of the temples at Eridu from Level 16 upwards (*el-'Ubēd* period): M. E. L. MALLOWAN, *The Development of Cities from al-'Ubaid to the End of Uruk 5*, Cambridge Ancient History I (Revised Edition), Fascicle 58 (1967), p. 11, Fig. I b; H. FRANKFORT, *Art and Architecture of the Ancient Orient* (Harmondsworth 1954) pp. 2–3.

<sup>43</sup> Cf. the east gate of Shechem: WRIGHT, *op. cit.* (above, n. 29) p. 75; KAPLAN, *op. cit.* (above, n. 34).

<sup>44</sup> In this connection, a word of caution is necessary with regard to the opinion that Stratum II at Troy (Early Bronze Age) contains a triple gate and even a gate with four pairs of piers! S. YEIVIN, *Encyclopedia Biblica II* (Jerusalem 1954) (Hebrew) col. 235, Fig. 66. This opinion is no longer valid as one can see from MELLAART's latest article in which he correlates the results of SCHLIEMANN's excavations with those of BLEGEN. It is now quite clear that neither a "quadruple" nor a "triple" gate existed at Troy; only the double gate was known there in this early period: J. MELLAART, *Notes on the Architectural Remains of Troy I and II*, *Anatolian Studies* 9 (1959) pp. 131–162.

<sup>45</sup> C. L. WOOLLEY, *Ur Excavations V: The Ziggurat and its Surroundings* (Oxford 1939) pp. 74 ff., Pls. 68, 77.

but its most characteristic features are the corridors in the inner sections of the two towers, which are entered by the rear rooms. Almost certainly the wooden stairs leading to the top of the towers were inserted inside these corridors<sup>46</sup>.

WOOLLEY describes at length the alterations and additions made to these structures in the Ur III, Isin-Larsa and Kassite periods<sup>47</sup>, and he dwells especially on the reconstruction of the Court of Nannar complex after it had been destroyed by the Elamites in 2006 B. C. The most important change of the Isin-Larsa period, from our viewpoint, was the transfer of the corridor openings from the rear entrance rooms to the casemate cells north and south of the gate; access to the top of the towers was now inside the Court of Nannar through the casemate rooms (Fig. 18b). This architectural change of the corridor fixes the "terminus ad quem" for this type of triple gate as not later than 2006 B. C. This is of the utmost importance when one comes to deal with the history of the triple gate during the MB II period in Palestine, since there is a surprising resemblance between the triple gate of the Court of Nannar and the north-west triple gate at Shechem, excavated by SELLIN. The resemblance is not only in the outward form. It extends also to the narrow corridors of the two gates at Ur and Shechem, since the corridor openings in both cases are found in one of the entrance rooms<sup>48</sup>. True, at Ur the opening is found in the rear room while at Shechem it is in the forward room; yet despite this difference it makes sense to compare the gate-plan at Shechem with the gate of Ur III and not with those of the Isin-Larsa, or even later periods, since in each of these cases the corridor openings are outside the gate structure, i. e. in the casemate cells. Thus it may be surmised that the builders of the triple gate at Shechem took as their model the gate of the Court of Nannar (as it was in the Ur III period and not later, for in the Isin-Larsa period it was already changed from its original plan). Of course it must be admitted that chronologically this contradicts the well-known conclusions of the McCormick Expedition, which has advanced the date of Shechem to Middle Bronze IIC. Apparently, only a trial excavation near one of the walls of this gate can ultimately clarify this problem.

### C. The Casemate Structures

Any survey of the Bronze Age casemate structures in Palestine will show that none of these date earlier than MB II. In this connection an important discovery was made recently at Hazor, where two segments of casemate walls on either side of a triple gate were exposed (Fig. 11). This complex was uncovered in level 3 of Area 9. YADIN states that "this is the earliest casemate wall of its type discovered so far in Palestine"<sup>49</sup>; it was dated by him to MB IIB<sup>50</sup>. However, at Shechem also were exposed, on either

<sup>46</sup> Cf. WOOLLEY, *op. cit.* (above, n. 37) pp. 148–149.

<sup>47</sup> WOOLLEY, *op. cit.* (above, n. 45) p. 75.

<sup>48</sup> It may be noted that on all the triple gates cited here, whether from Syria or Palestine, the opening to the staircase corridor is in the forward entrance room of the gate. According to WOOLLEY this was the vulnerable point of the Alalakh gate; see *op. cit.* (above, n. 37) p. 145.

<sup>49</sup> Even here no evidence was found for the existence of casemate structures in MB I.

<sup>50</sup> YADIN, *op. cit.* (above, n. 32) p. 163.

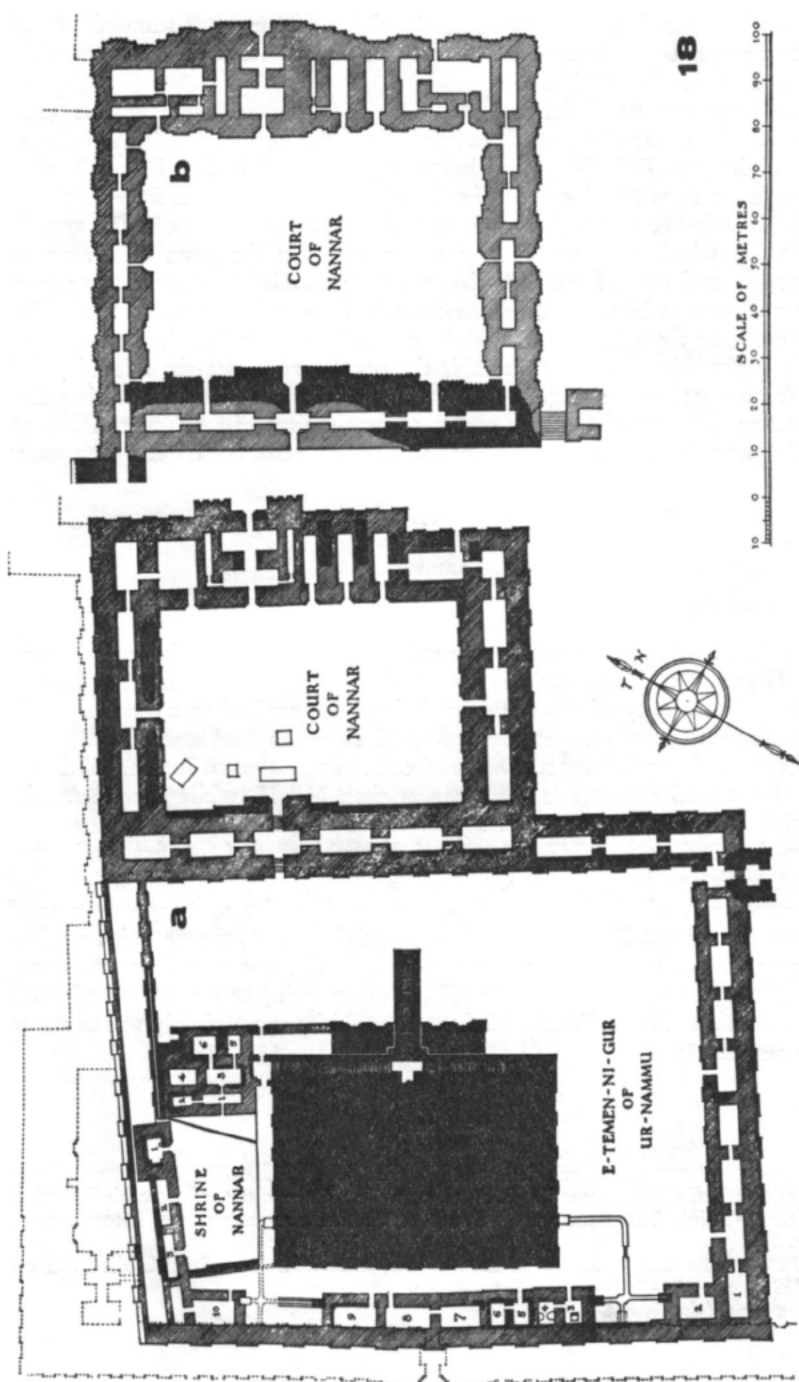


Fig. 18. Plan of the Sacred Enclosure at Ur:  
a. Third Dynasty Period. b. Isin-Larsa Period (Court of Nannar only)  
(from C. L. WOOLLEY, *Ur Excavations V*, Pl. 68.70 [by courtesy of the British Museum])



side of the northwest gate, sections of casemate walls, one of which at least was built apparently at the same time as the gate (Fig. 10). Thus, if our assumption of the early date of the gate at Shechem is correct, the date of the casemate wall connected with it is also early, viz. the end of Ur III.

Casemate structures not belonging to any city wall are found in the sacred enclosure of Shechem, east of the northwest gate (marked "temenos" 3)<sup>51</sup>. An examination of the findings at *Tell el-'Ağūl* makes it appear plausible that Palace I, also a casemate construction, was in fact part of a sacred enclosure, as at Shechem<sup>52</sup>. A perhaps similar MB II enclosure at Megiddo was traced by CLAIRE EPSTEIN<sup>53</sup>. The question arises, therefore, whether the casemate sections found in the gates of Hazor and Shechem ever formed part of sacred enclosures. It is certainly reasonable to suppose that this was the case at Hazor, where two corners of the enclosure were exposed (Fig. 10). At Shechem, on the other hand, no such corners have been found; yet the narrow rooms at the right side of its gate resemble the narrow rooms at the left side of the Court of Nannar gate-tower (Fig. 18a). Thus it would appear that the triple gate in Palestine was at first part of a square enclosure, on the lines of the Court of Nannar, and only in time did it turn into a fortification not connected with any sacred enclosure.

#### D. Summary

##### a. Earth Ramparts

In this article has been proposed a new approach to classifying the main elements of the MB II earthwork fortifications, i. e. wall rampart, freestanding rampart and glacis. To test the validity of this approach it has been applied to a number of sites where such elements have been exposed. Special emphasis has been placed on the difference between the wall rampart and the freestanding rampart. It emerged that the beginning of the wall rampart is much earlier than MB II, while the freestanding rampart is not found at Palestinian sites prior to MB II. Moreover, since the rampart enclosure at *Yavnē-Yām* dates MB IIA, the origin of this type of fortification has been sought in an earlier period, namely Ur III, i. e. slightly before the beginning of the migratory movement of the Western Semites (Amorites) from Mesopotamia to the east Mediterranean coast. This theory is based, mainly, on: 1) the probable origin of the defensive rampart in the levees of the ancient irrigation canals of Mesopotamia; 2) a number of text fragments from the Ur III period, pointing to a connection between the Amorites and the "*Murīq Tidnim*" defence line which most probably was constructed of earth ramparts<sup>54</sup>.

<sup>51</sup> WRIGHT, op. cit. (above, n. 30) p. 114 ff., Fig. 64.

<sup>52</sup> W. M. FLINDERS PETRIE, *Ancient Gaza III* (London 1933) Pl. XLVI. For corrected dates of the finds at *Tell el-'Ağūl* see: W. F. ALBRIGHT, *The Chronology of a South Palestinian City, Tell el-'Ajjul*, *The American Journal of Semitic Languages and Literatures* LV (1938) p. 359.

<sup>53</sup> CLAIRE EPSTEIN, *An Interpretation of the Megiddo Sacred Area During Middle Bronze II*, *IEJ* 15 (1965) pp. 204–221.

<sup>54</sup> KAPLAN, op. cit. (above, n. 14) note 47.

## b. Entrance Gates and Casemate Walls

Two types of entrance gates to walled towns and rampart enclosures have been distinguished: 1) the double gate, which first appeared in Palestine in the Chalcolithic period; and 2) the triple gate, which began to appear in Palestine at the end of Ur III, at latest, i. e. the beginning of MB II. Undoubtedly with the appearance of the triple gate must be linked the first casemate walls. Our thesis about the influence of the gate-plan of the Court of Nannar on the plan of the triple gate at Shechem has now been substantiated by the segments of casemate walls found at Shechem and Hazor.

Through this article and my "Mesopotamian Elements in the Middle Bronze II Culture of Palestine" runs as a common thread the idea that the beginning of the MB II period in Palestine is connected with the migration of the West Semites from Mesopotamia to the east Mediterranean coast towards the end of the third dynasty of Ur. The latest date suggested for the beginning of this migration is 2006 B. C., that is, the year in which the Ur III kingdom was destroyed. Yet the ceramic evidence cited in our former article implies that perhaps this date should be put back somewhat<sup>55</sup>. This view is now supported by our conclusion that some of the fortifications in this country also date early; hence, there is ground for believing that the spread of the Amorites westward may have begun even before 2006 B. C., perhaps during the rule of Shulgi, when according to ALBRIGHT, Ur was "the greatest commercial capital that the world had yet seen, reaching its climax under Shulgi and his successors"<sup>56</sup>. At any rate, documents unearthed in Mesopotamia attest that Byblos was the seat of one of Ur's governors (*ensi*)<sup>57</sup>. Did the authority of Shulgi also extend to Palestine? If it did, the possibility cannot be ruled out that the sacred enclosure with triple gate at Shechem was built already in the period of this king. In the light of the foregoing, it may be suggested that the beginning of MB IIA in Palestine should be put back to the time of Shulgi; which means that the westward movement of the Amorites, who apparently were the bearers of the Ur III culture and authority, already began before 2050 B.C.

<sup>55</sup> KAPLAN, *ibid.* pp. 304–305.

<sup>56</sup> W. F. ALBRIGHT, *Abram the Hebrew: A New Archaeological Interpretation*, BASOR 163 (1961) p. (36–54) 44. It should be remembered that ALBRIGHT is using the "low chronology dating".

<sup>57</sup> G. POSENER et al., *op. cit.* (above, n. 27) p. 31; ALBRIGHT, *op. cit.* p. 45.