

## **NEOSOIKOI IN KITION, CYPRUS**

For about fifteen years a French archaeological mission<sup>1</sup> has been exploring the site of Bamboula, in Larnaca (Cyprus), on the northeastern edge of the ancient city of Kition, the capital of a Phoenician kingdom from the 9th to the 4th cent. B.C. The importance of the city was also attested by excavations carried out by the Department of Antiquities in Cyprus since 1959 in the area called Kathari, to the north of the city<sup>2</sup>.

The literary and epigraphical sources<sup>3</sup> substantiate the history of the Phoenician kingdom of Kition during the Classical period (5-4th cent B.C.), and archaeological discoveries at Kathari and Bamboula for the past thirty years have confirmed its importance (Figure 1). At that time, the area of Bamboula sheltered a sanctuary dedicated to Astarte, seemingly identified here as the Cypriot Great Goddess of Fecundity, and to Melqart, a male god some characteristics of whom equate him with Herakles who was the patron of the royal Phoenician dynasty both in Kition and in Tyre.

### **THE HARBOURS OF KITION**

It is unanimously admitted that the main feature of the Phoenician power was its connection with the sea; trade and navigation were essential to the Phoenicians. However, the literary sources (especially Herodotus and Diodorus) indicate the existence of Phoenician and Cypriot naval forces during the Classical period, which were put at the disposal of the Persians - for example during the Persian wars, in the early 5th cent.- or the Greeks - Alexander the Great in the 4th cent. The figures of triremes which appear on the royal coinages of Sidon and Byblos<sup>4</sup> are clear references to the significance of such a naval strength. The Phoenician cities, e.g. Tyre on the mainland and the island of Tyre, Sidon on its promontory or Arwad off Tartus would generally enjoy two harbours, one to the north and the other one to the south which would be used according to the winds.

Such might have been the situation in Kition, but recent urbanization in Larnaca prevents us from making certain it since the coast line is now straight due to natural silting up and sea-level changes, or as a result of the works undertaken by the British administration in 1879-1880<sup>5</sup>. The actual question would be then to figure out the precise locations of the ancient harbours: the trading activity would require a commercial port, and on the other hand the naval forces would

need to be sheltered in a military harbour. However, when describing the coast of Cyprus, Strabo states that Kition had a κλειστός λιμὴν (XIV, 6, 3), that is a closed harbour<sup>6</sup>.

The trading harbour was most likely an open anchorage place, traces of which will probably never be found. On the other hand, recent discoveries have allowed us to locate the site of the military harbour which was in use during the Classical period. Badly damaged structures were uncovered in 1985 to the north of the open terrace of the sanctuary on the Bamboula, and remained for some time difficult to interpret: they were finally identified as the remains of ship-sheds (νεώσοικοι, νεώρια) with inclined planes or ramps to support the ship hulls.

The structures initially cleared were set in a large rectangular area (squares G-L/8-9 of the grid), and countless fragments of tiles let us assume that it was roofed<sup>7</sup>; it was also established that it was a building for public purpose dated to the Classical period (late 5th cent. B.C.?) and probably related to Melqart's sanctuary which it limited to the North (Figure 3). The extension of the excavation allowed us to discover ramp-shaped structures and to suggest that they might have supported ship-hulls; the assumption of a roof built on pillars was established<sup>8</sup>.

Several ramps (6, possibly 7) were cleared in 1988, and the general interpretation thus confirmed (Figure 4); new evidence was brought up on the orientation of the ramps, the stratigraphy of the building, its datation in the Classical period, etc. The 1989 and 1990 seasons of excavation allowed us to clarify several details of the building techniques and to elucidate the three chronological phases of the building<sup>9</sup>.

A water-table at the altitude 1.60/1.80 m above sea-level used to flood the lower parts of the excavation (Figure 2), and we had to turn to water-pumps, which was made possible in 1990 thanks to the efforts of the Municipality of Larnaca; however, such conditions oppose an easy development of the excavation, and its final completion will probably take longer than we would have wished.

The exact plan of the ancient city of Kition (Figure 1) is hard to make clear as it is hidden by the modern town of Larnaca, and suffice it to say that the hillock of Bamboula is located in the eastern part of the city, not far from the present coastline. The maps drawn in the 19th century<sup>10</sup>, and more precisely the sketch-plan by the French consul Auguste Dozon published in the first volume of the *Corpus des Inscriptions Sémitiques* in 1881<sup>11</sup> show a small pool linked to the sea by a narrow channel near the Bamboula hill - the marsh and the channel having been filled up by the British drainage works in 1879-1880. One may reasonably

assume that it was the latest trace of the ancient closed harbour, still visible if not useful.

### **DESCRIPTION OF THE REMAINS**

The section of the harbour structures of Kition-Bamboula so far cleared extends over ca 525 square meters, but it can fairly be assumed that they would have spread much more widely in antiquity.

The southern limit of the harbour structures is the northern retaining wall of the courtyard of the Classical sanctuary; the courtyard extends to its South and its floors of the Classical period are preserved at a level ca 5.50 m; the harbour structures stood to its North at a level ca 2.50 m, and the visible face of the retaining wall (i.e. its northern face visible from the harbour complex) was about 3 m high: it is made of dressed stones covered with a thick plaster coating. Every 6 metres the retaining wall is strengthened with interior (=South, buried under the terrace) and exterior (=North, visible) buttresses which delineate a northern bay, or space, in which the ramps for the ships have been built. Six ramps have been completely or partially cleared so far. To the West, remains of a returning wall, that is contiguous to the main retaining wall, might indicate the western limit of the architectural complex; to the East, on the contrary, there is hardly anything left as a result of the dismantling of the Bamboula hill in 1879 - 1880, and the likelihood that more ramps might have existed on this side should not be discarded.

These ramps are in quite a different state of preservation, and when preserved, exhibit three architectural stages. Actually, the most important and best preserved one is the earliest stage, dated to the 5th cent. B.C.

#### **Early phase.**

Each long and slightly trapezoid ramp 11 m in its south - north length (when fully preserved) and about 2 m wide, east - west. Their maximum height is 1.90m to the South, and they slope down northwards at a slope of ca 13°. They consist of a facing wall on each side, east and west, built with dressed stones and undressed blocks carefully joined with a white plaster, and a rubble filling mixed with plaster too; the whole structure is covered with a thick and even coating of white plaster on which some stains of red painting are still visible. On each side of the sloping surface of the ramp one can see a deep, rectangular groove meant to wooden beams on which logs were used for towing the ship. A small protuberance can be seen on the southern end of each ramp, at the base of its highest point: it most

likely was the wedging socle for a post meant to support the precariously balanced ram of the ship.

Along a six meters balance alternating with the ramps, three unconnected walls are alligned on a south - north axis facing each buttress of the main wall; they are 0.80 m wide and *ca* 3.50 long (average), the interspace between two walls being *av.* 2.50 m. They were used as massive pillars on which the supports of the roof stood, each bay/ramp being roofed individually. One may reasonably assume that the lower part of these massive pillars was used to wedge oblique struts which helped support the hull of the ship when it was laid on top of the ramp.

Circulation from the ramp - bay to the other one was made possible to the south through a long east - west passageway, 1.20 m wide, running along the full length of the retaining wall on its northern face. In the internal between two buttresses, the passageway is lined by long basins (vats?), 0.60 m wide from the retaining wall to the passageway, each basin being edged with a parapet made of standing slabs along the passageway; the function of these structures remain uncertain. One should notice, too, in the upper part of the inner face of the buttresses, nicely fitted holes perhaps meant for horizontal wood beams to which the ropes which fastened the ship might have been fixed.

The south - north circulation would take place in a narrow passage between the ramp and the pillar - walls (*ca* 0.80 m). One could step up from the southern passageway on three large steps built with nice slabs of marmaro on each side of the ramp; then a path of hard - packed surface is gently sloping down northwards to the harbour itself, the waters of which having been most likely leaping a few meters ahead of the northern end of the ramp.

We have already mentioned the roofing; one should suggest a double - slope roof of tiles above each bay of a ramp. The wood framing, six meters broad, was laid on wood poles standing on top of the retaining wall and the group of the three walls which divide a bay from its neighbors.

### **Second phase.**

The second stage in the development of the harbours structures corresponds to a significant re-shaping of the architectural complex and can be dated to the 4th cent. B.C.

The main change is a widening and, moreover, a lengthning of the ramps; they are now about 15m long and 3m large, the eastern ramps being 2.50m high and the western ones 3.20m. These adjustments might be either a consequence

of a change in the size of the ships, or the result of a variation - fall - in the sea-level which would have required a lengthening of the ramps: no firmer suggestion could be offered yet. The repair was made in two different techniques. The three ramps to the east were doubled on each side of the ramp by new walls made of rubble and plaster, with an interior filling of rubble; the floor was a hard-packed surface, not plane but steeply convex. The three ramps to the west were repaired in a similar way, but the doubling walls were erected with mudbricks. Using such a lower quality and less resistant material would point to a hasty repair, with limited financial means as well.

The lengthening and raising of the ramps resulted in a change of the surrounding floor levels. To the very north, the hard-packed surface near the harbour was probably preserved, but the floor levels of the southern section of the building were raised. In order to do so, small retaining walls of undressed stones were built on an east-west axis at the northern end of the first row of pillars, and the whole southern sector was filled in; on the contrary on what was evidenced by the passageway of the stage, the floor levels of the second phase are not even, and there is a difference in height between the lower floor levels to the east and the higher ones to the west. Slabs of marmaro were laid on the floors along the pillars of the first row to the south (they had been raised up as well); these slabs might have been used as a solid base for the struts which helped support the hull of the ship on the ramp. There is slight evidence that the roof might have been repaired, too; however, it should have been quite similar to the previous one.

### **Third phase.**

Further repairs were carried out during the 4th cent. B.C., too, and they are clearly visible on the westernmost ramp only; however, flimsy remains in the central part of the building might be an indication of a larger extension of the third phase. The excavation of the western sector is not completed yet, and the restitution of this phase is still tentative. To the very south, the floors around the once-more raised ramp are at the same level as the top of the retaining wall and, consequently, of the terrace; the highest point of the ramp is 1.50m above this floor level, that is 4.70m above the floors of the first stage and 2.20m above the contemporary highest point of the ramps. The northern part of the westernmost ramp has not been excavated yet, but since the slope seems to be regular and almost the same as that in the second stage, a total length of 17/18m is likely. There is no indication of any roof in the very damaged remains of this last phase, but a roof should have sheltered the ramp.

### Interpretation

Many different sites around the Mediterranean shores have previously yielded remains of structures from different periods which might be interpreted as ramps for ship hulls; one of the most famous is indeed the *cothon* at Karthago, but it is about two centuries later than the harbour of Kition<sup>12</sup>. The interpretation of the remains presented above is primarily based on a comparison with the Classical remains uncovered in Piraeus, north of the Zea basin, by W. Dörpfeld in 1885; we can see there a similar alternation of ramps sloping down to the basin of the harbour and bases supporting a roof, as well as a massive wall of dressed stones which closes the building<sup>13</sup>. The dimensions can be easily compared, at least for the width, with the 6m interval between the axes of each ramp. However, in contrast to the ramps at Piraeus the total length of which was reconstructed in order to fit with the 30-35m long triremes, the ramps at Kition never exceeded 15m. Should we assume that the extremities of the ramps of Kition have been destroyed for ever, or should we suggest that they were built for a part of the ship only?<sup>14</sup>. An answer may come from further excavation.

The structural composition of the *neosoikoi* at Piraeus and Kition is basically identical in spite of several differences in the details and the building techniques: sustaining walls for the roof at Kition, vs square individual bases at Piraeus; a double-slope roofing for each ramp at Kition, vs the proposal of the architects for a double-slope roof for two ramps at Piraeus, etc. However, in the expectation of the complete excavation of the Kition complex, we feel authorized to offer a reconstitution based on the Piraeus example: Figure 3.

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### NOTES

- \* We express sincere thanks to Professor Homer Thompson who kindly suggested several improvements of our English translation.
1. French excavations under the direction of M. Yon since 1976; see preliminary reports in "Chronique des fouilles et découvertes archéologiques à Chypre", *BCH* from 1977 onwards; see also the publication volumes *Kition-Bamboula* I to IV, 1989 to 1992 (ERC, Paris; more volumes are in preparation).
  2. Cypriot excavations under the direction of V. Karageorghis from 1959 to 1985; see reports in the "Chronique", *BCH*, same dates; see also the publication volumes *Excavations at Kition (Fouilles de Kition)* I to V, 1974 to 1985 (Nicosia); vol. VI is in preparation.
  3. Forthcoming publication: *Kition-Bamboula V. Testimonia. The Phoenician were* edited by V. Karageorghis and M.-G. Guzzo-Amadasi, *Fouilles de Kition* III, 1977.
  4. L. Basch, *Le musée imaginaire de la marine antique*. Athens 1987 (Phoenicia: 328-335).

5. A full description of these works will be found in J.-F. Salles, *Kition-Bamboula IV* (in press: 1992).
6. For the demonstration that the triremes of the Classical times had to be towed and dry docked in ship-sheds, see M. Yon, "Kition et la mer" *Actes du Colloque de Ravello* 1989 (in preparation).
7. "Chronique", *BCH* 110 (1986): 853-855.
8. "Chronique", *BCH* 112 (1988): 827-830.
9. "Chronique", *BCH* 113, (1989): 824-826; 114 (1990): 962-967.
10. K. Nicolaou, *The topography of ancient Kition*, Göteborg, 1976.
11. *CISI*, Paris 1881: 35.
12. References in M. Yon, *Colloque Ravello* 1989, *supra* n.6.
13. A model is exhibited in the maritime museum at Zea; plans drawings in N. Papahatsi, [*Pausania Ellados periegesis*: in Greek], *Ekdotiki Athinon* 1974, fig. 25: 100-101 (=plan W. Dörpfeld 1995, fig. 33: 106), fig. 30: 104, fig. 34: 107 (see also Sounion, fig. 16 and 17).
14. The suggestion that these shelters were not intended for triremes, especially in a Phoenician harbour in Cyprus, but for shorter war-ships should not be discarded.

### ILLUSTRATIONS

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1. Sketchplan of the ancient city of Kition - from *CIS I*, 1880: 35.
  1. Kathari
  2. Bamboula
  3. Marsh and channel still visible in 1880
2. Neosoikoi at Kition-Bamboula, to the north of the Cypro-Classical sanctuary (1990 sounding in the watertable).
3. *Neosoikoi* and classical sanctuary at Kition-Bamboula: a suggested restitution.
4. *Neosoikoi* at Kition-Bamboula: ramps of the first phase (photo 1990).

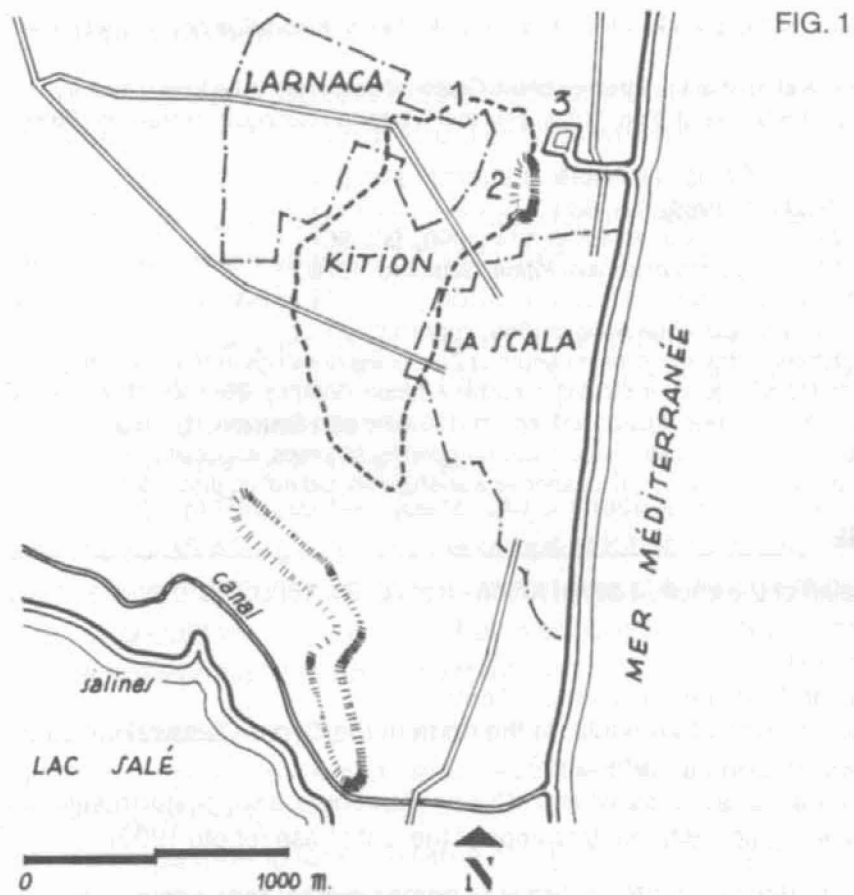


FIG. 2



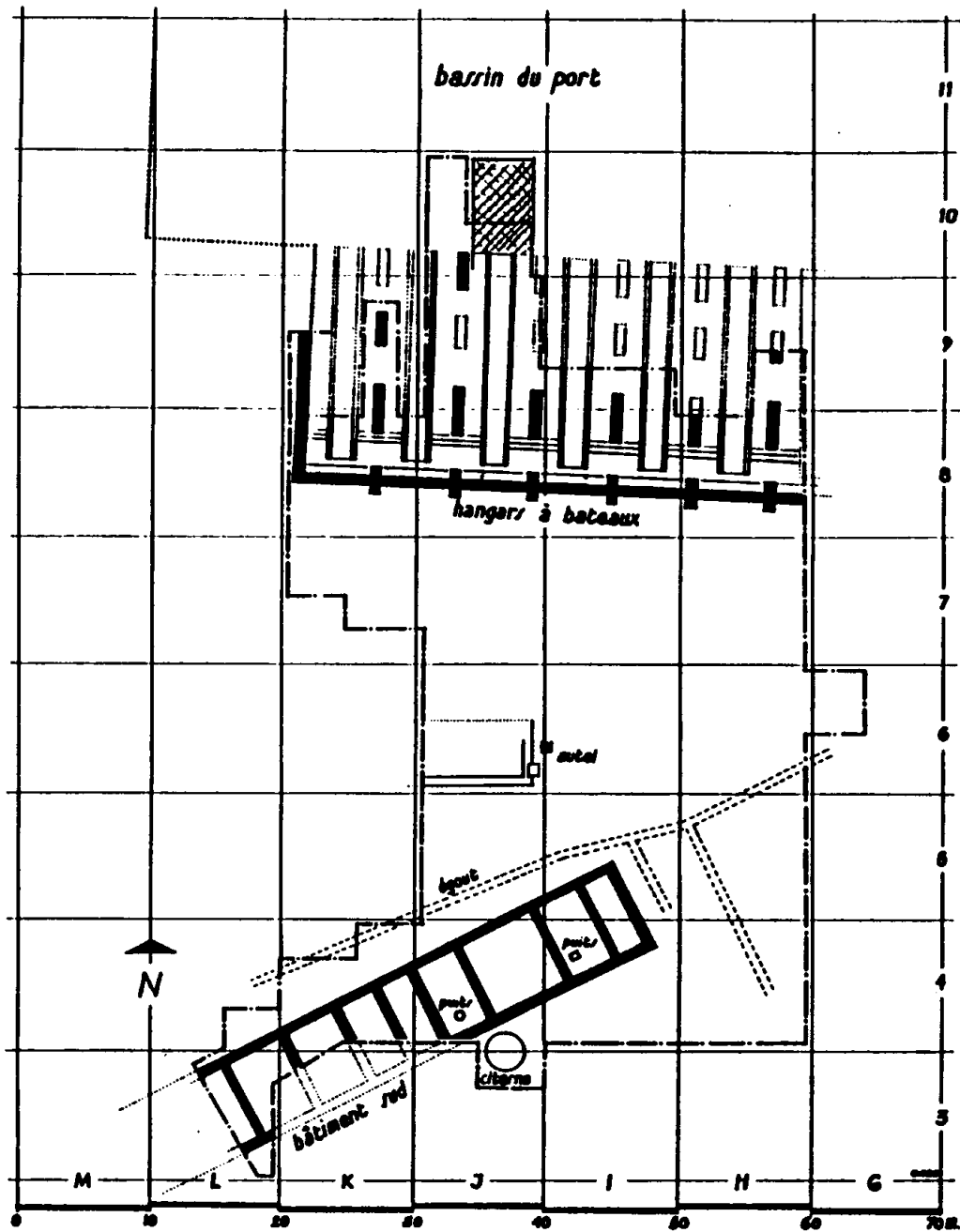


FIG. 3a

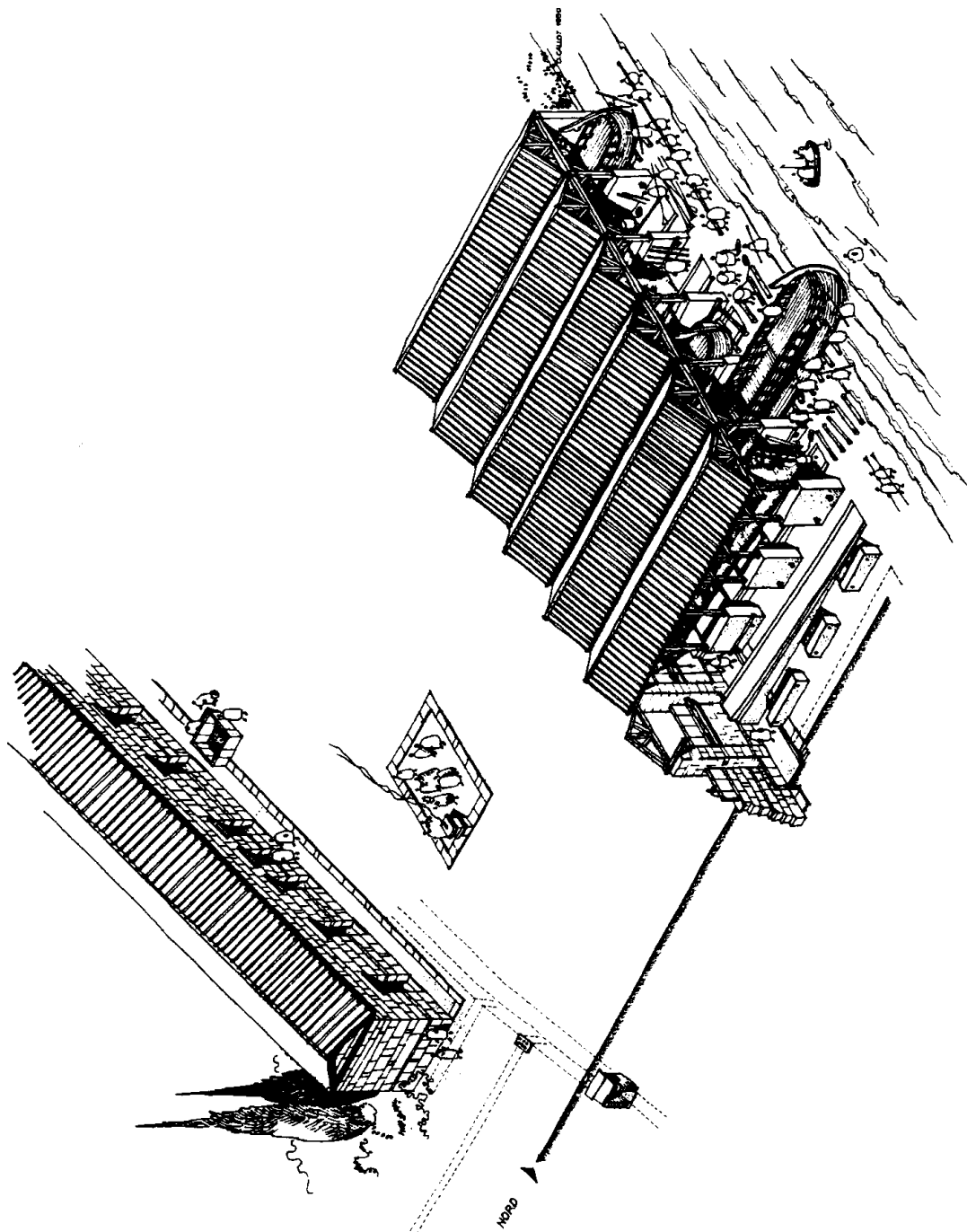


FIG. 3b

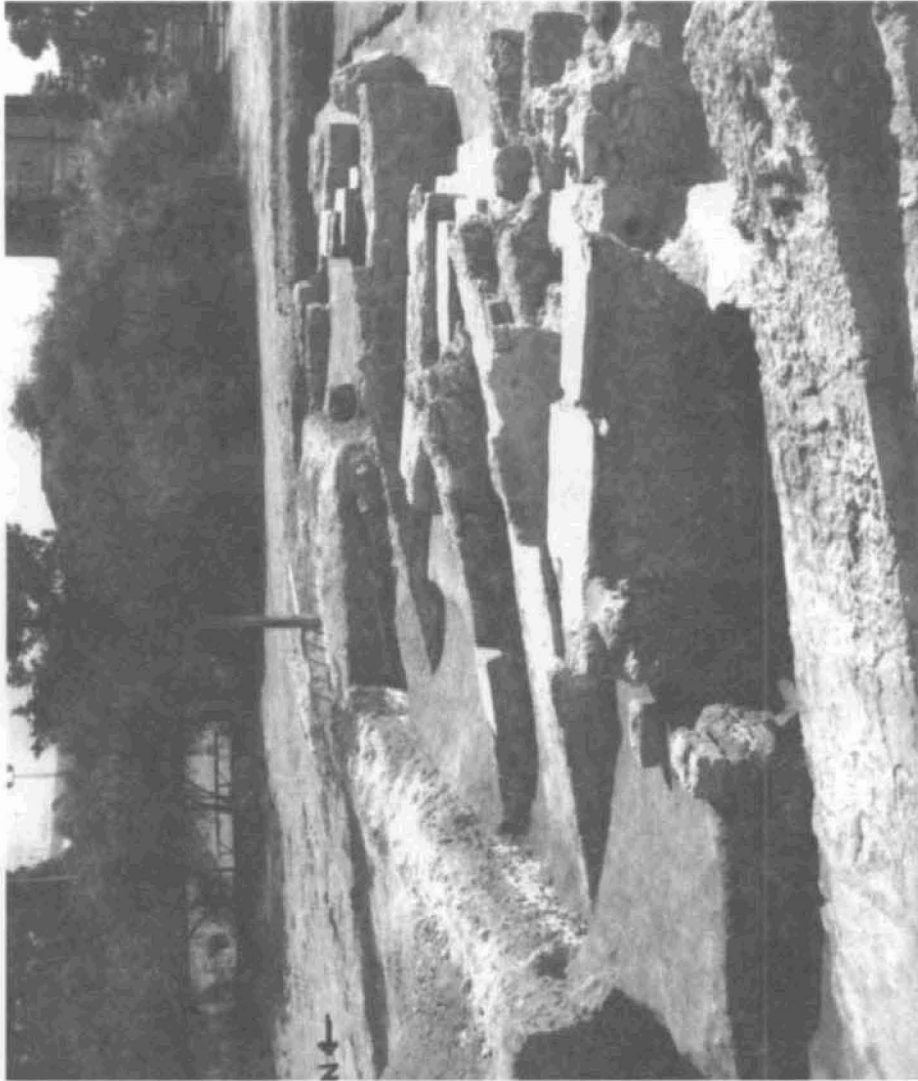


FIG. 4

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