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The underwater excavation at the ancient port of Thasos, Greece

Aglaia Archontidou-Argyri, Angeliki Simossi
Greek Department of Underwater Antiquities, 30 Kallisperi Street, 117 42 Athens, Greece

and Jean-Yves Empereur
Ecole Française d'Athènes, 6 Didotou Street, 106 80 Athens, Greece

The present day harbour of Thasos was built on the ruins of the ancient port, a common phenomenon in Greece. In order to supply the present needs of shipping, it was found necessary to dredge the harbour basin. This resulted in the discovery of antiquities and the subsequent immediate suspension of work by instruction from the Greek Department of Underwater Antiquities in order to conduct underwater excavations.

Thus, in 1984, and with the purpose of obtaining a better idea of the state of the harbour, a salvage investigation was initiated in co-operation with the Ecole Française d'Athènes which was supposed to finish within a specified time limit (Figs 1 and 2). So far, the investigation has been conducted in three different periods, covering 9 working weeks over all, during the years 1984, 1985 and 1987.[1] On an average seven divers, three architects and one restorer were used and very few technical aids (three to four hydrolifts), since the use of an airlift was not possible due to the shallow water. The shallow depth (1·5–3 m) made working conditions difficult; moreover in some parts of the harbour the underwater visibility was zero. An example characteristic of these conditions is the method of drawing of section Figure 11 by the architect, Tony Koželj, published below, which we can describe as having been made by touch as a result of the lack of visibility underwater, due to the discharge from the drainage systems. In this case, the architect was obliged to surface each time it was necessary to read the measuring tape.

However, in spite of these adverse conditions

Figure 1. The port before the excavation (photograph by P. Vetzitzis).

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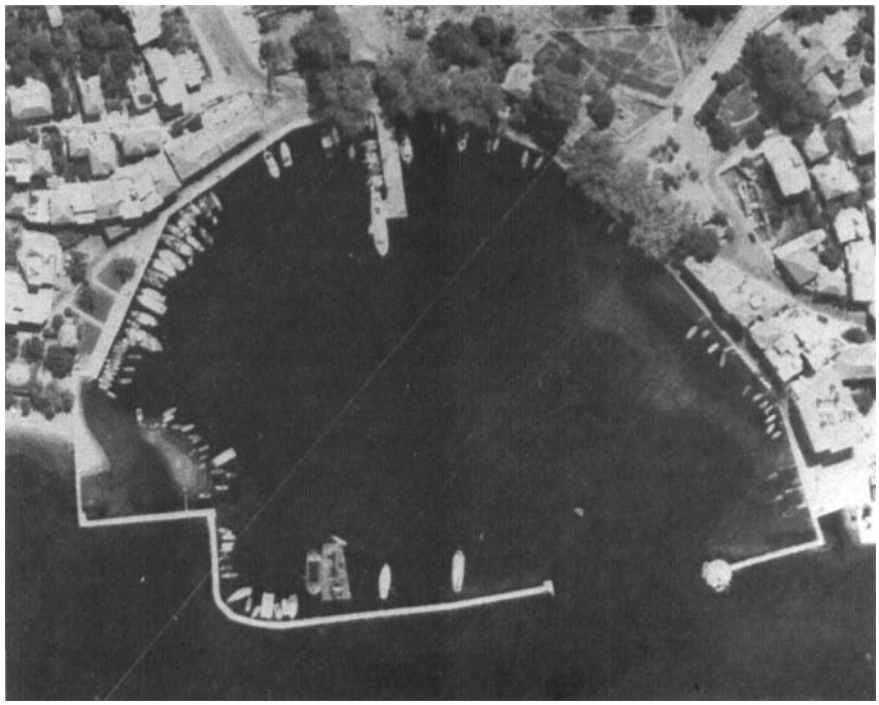

Figure 2. Aerial view of the port (Ministry of the Environment).

we have managed to revise the picture of the ancient port of Thasos. Comparing our research with the plan that was published in the *Guide de Thasos* (1968), fig. 4, we can now come to the following definite conclusions (Fig, 3).

(1) We are now sure of the existence of not one, but two ports, one dating from classical times and the other, archaic, found outside the classical port.

(2) We are convinced that the outline of the classical closed port is different from that published in the *Guide de Thasos*.

The archaic port

So far, the western part of the mole of the archaic port has been discovered and studied, whereas we still know nothing about the northern part of the port about which we can only make suggestions. The discovery of the archaic port came as a surprise to us. It is larger than the classical port and lies outside it towards the open sea. The course of the western archaic mole starts from the northeast of the green beacon light at the entrance of the present-day harbour and can be traced for a distance of 120 m, as far as the present-day landing pier. At the entrance to the harbour it bends to the west, moving 11 m away from its original straight line. It then continues its course, and near the western corner of the closed harbour it runs towards the open sea for a distance of approximately 25 m. Finally, we come across it again in the open sea at a distance of 58 m from the modern landing pier, with two bends formed by two curved lines (Fig. 3).

The archaic mole is built of marble and schist. The marble blocks (*c.* 2·2 × 1 × 1 m) must have formed the last few courses of the mole (Fig. 4). They are laid out alternately as stretchers and headers, and according to their position have ties on two or three of their sides. From trenches dug along the mole on its inner and outer sides, we know that it was made up of at least four or five courses. The largest schist blocks measure 2·5 m in height, 1·5 m in width and have a thickness of 0·3 m. Their arrangement in the construction is the same as that of the marble blocks in the upper courses without, however, being properly placed (stretchers alternating with headers), so that

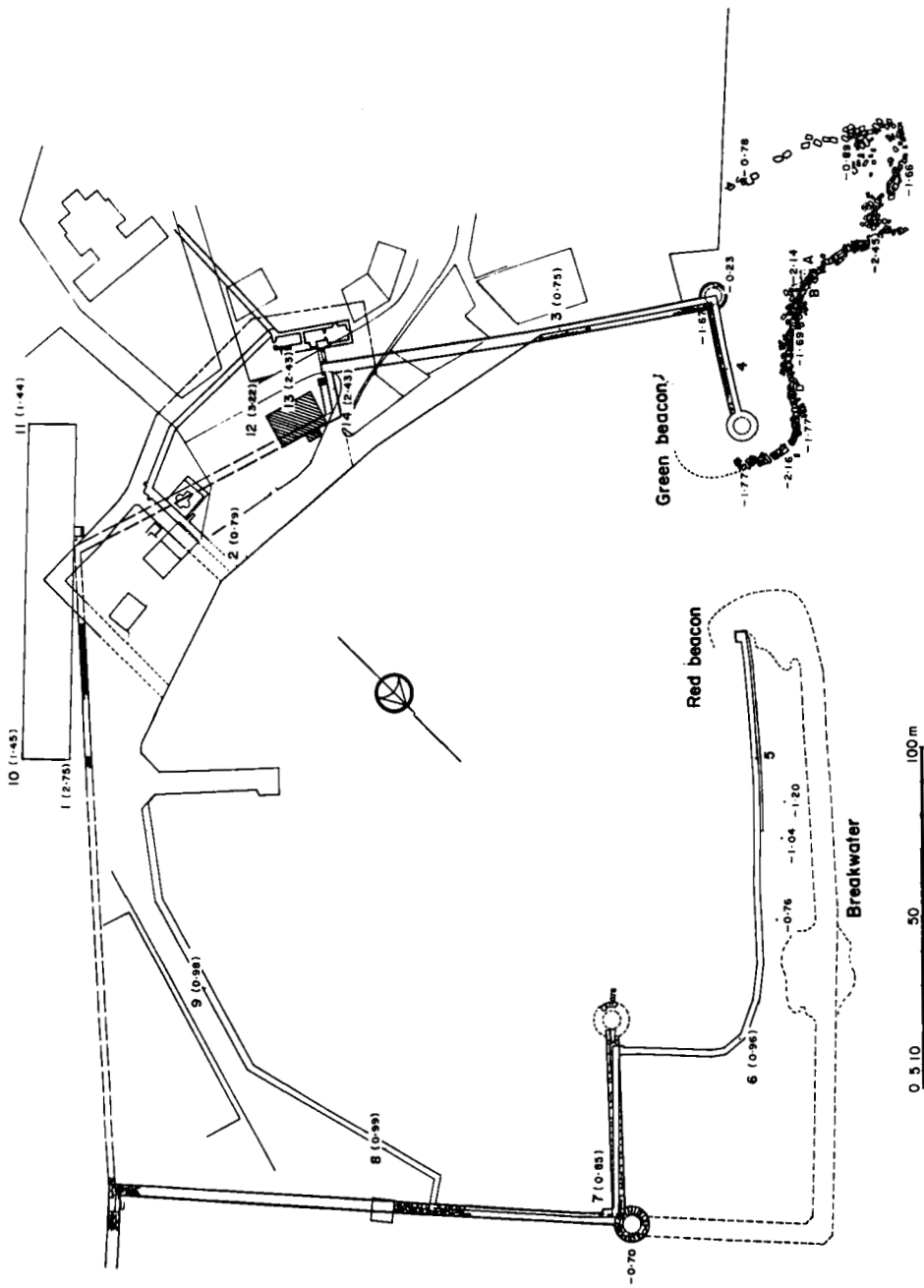

Figure 3. Plan of the port 1987 (N. Lianos & T. Koželj).

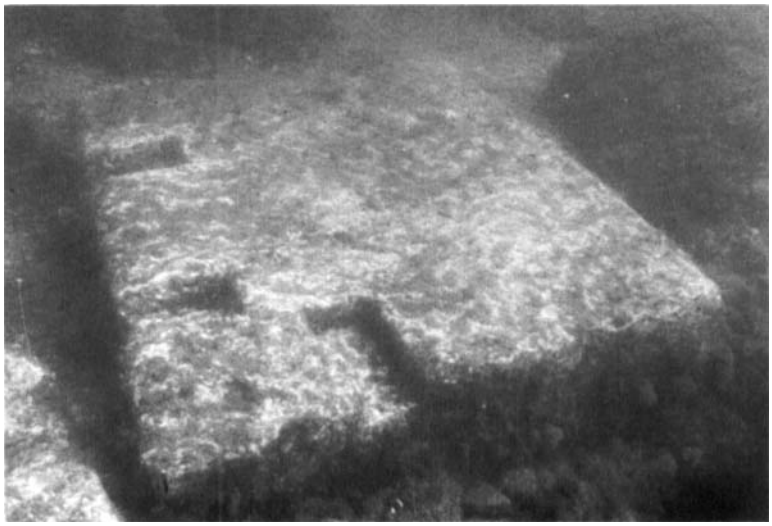

Figure 4. A marble block with three ties (photograph by J.-Cl Hurteau).

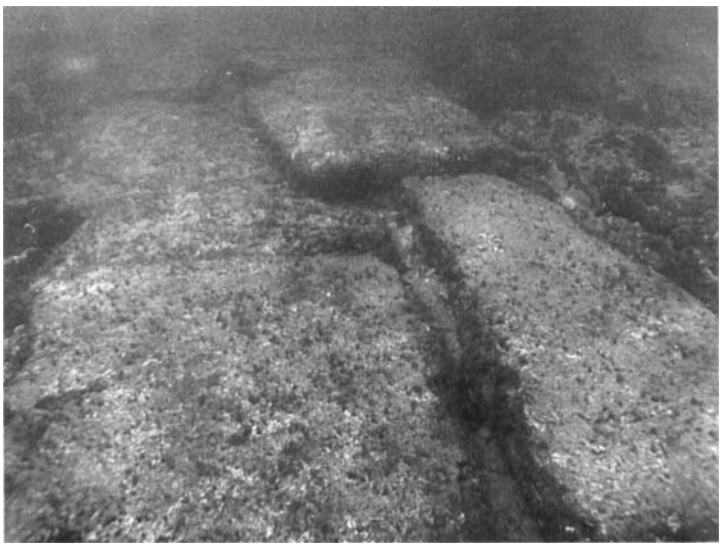

Figure 5. General view of the schist blocks (photograph by J.-Cl. Hurteau).

there are as many as four headers next to each other, and then three stretchers next to each other (Fig. 5). In many cases we have ties on the slate blocks, and they are of the same type as those on the marble, a rare practice for this type of stone.

We do not know how many courses are missing from above those we have discovered. The presence of ties, however, shows there were at least two courses, one of marble blocks and one of schist blocks, which certainly rose above the surface of the sea.

During the last two excavation periods, we have dedicated a great deal of time to cleaning the upper surface of the archaic mole in order to trace its course. In order to understand its construction, we excavated two trenches in the same area, one on the inside and the other on the out-

Figure 6. Archaic mole, outer side sondage: the block courses and the rubble (photograph by J.-Cl. Hurteau).

Figure 7. Archaic mole, inner side sondage: a view of the blocks and the beach rock (photograph by J.-Cl. Hurteau).

side of the mole. Approximately at the centre of the mole and on its outer side we opened a triangular trench: the base of the triangle, which was 3·5 m long, was the front of the mole. Here, we discovered four courses in all (Fig. 6). The blocks of the second course are 0·38 m thick, while the first course is 0·18 m and the third course 0·25 m thick. The stratigraphy of the outer trench is confused, and material coming from different periods has been swept in and mixed together by the waves.

Another triangular trench was opened at the inner side of the mole, with a base of 3·5 m along the inner face (Fig. 7). Five courses of schist blocks were discovered here, of which the first projects beyond the rest. The blocks vary in

thickness from 0·16 to 0·3 m. The stratigraphy of the inner side is different, being made up of beach rock (natural sea cement) to a depth of 0·62 m. Underneath, there was a layer of sand, gravel and rubble. The original seabed was found 2·8 m below sea level.

Not much in the way of data exists for the dating of the archaic mole, and the only evidence we have for the period of its construction is from the shape of the ties (Fig. 4). Comparable ties have been found in the circular well on the Valma property and in the Heracleion at Thasos. There, these axe-shaped fastenings date to the end of the 6th century or to the beginning of the 5th century BC. Certainly, the mole was destroyed at some point, as is shown by its inclination towards the sea. This destruction was the result of some natural phenomenon such as an earthquake or landslide, and the beach rock was formed immediately afterwards. The material trapped in the beach rock determines the dating of the destruction of the mole. This destruction dates to the end of the 4th century BC, as demonstrated by the seals on the handles of amphorae from Thasos which we found. One which we were able to identify accurately bears the legends Thasion and Aristodikos, and dates from the last decade of the 4th century BC (Fig. 8).

Figure 8. Amphora handle with a bucket and the name of the Thasian potter Aristodicos (photograph by J.-Y. Empereur).

We do not know as yet whether the construction we have discovered was in fact a mole or rather a wall; whereas there is no doubt in the case of the classical port, where we know that the construction was a wall. In the case of the archaic constuction (wall?), excavations have not been undertaken on dry land as yet, and thus we have no indication as to the direction the archaic wall takes from the ancient city towards the open sea. The size of the stones indicates that it was probably a wall, but we do not know how many courses are missing and how many courses were above the surface of the sea.

The closed classical port

It is easier for us to trace the outline of the closed port since the present day landing piers were built on the ruins of the ancient port, and the

Figure 9. Old photograph of the western tower, *c.*1910 (photograph from the Ecole Française d'Athènes).

Figure 10. The western tower, 1985 (photograph by J.-Y. Empereur).

Figure 12. Northeast breakwater with medium-sized unworked stones (photograph by P. Vetzitzis).

modern foundations were built on approximately half of the width of the ancient walls (Figs 2 and 3). In this case, we are certain that the sections of the classical port which have been discovered belong to the classical city wall, since we can follow its continuation on dry land.

The wall had been reinforced with four circular towers at its corners and its outer ends towards the open sea; we are not yet sure of the existence of a fifth tower at the northern part of the entrance to the port, where the red beacon light is located (Fig. 3, to the right of no. 5).

The sea wall (excavated in 1975–8) starts from the gate which is found close to the western part of the Agora [*BCH* **103** (1979): 635–40] and continues westward 120 m to a circular tower which

can be seen clearly and was excavated in 1984 (Fig. 3 between nos 3 and 4: Figs 9, 10 and 11). At this point, the wall turns a corner and continues towards the NE for 31 m, reinforced at its end by another circular tower to the east. The first tower is 8 m diameter, and the second tower is 8·66 m.

On the opposite side, which remains for the most part still unexplored, the sea wall meets the city wall at a right angle. This corner, including the beginning of the sea wall, was uncovered during an earlier excavation, and we are sure of the direction it takes towards the sea since the Greek Department of Underwater Antiquities has uncovered two more sections of it.

The sea wall is 148·6 m long from its beginning at the point of its intersection with the land walls to the first circular tower (10 m diameter). From this point, where it makes an angle, it continues west for 45 m where there is yet another tower which we have discovered but have not cleared (dotted lines on the plan, Fig. 3).

The location of the foundations of the northern present-day pier, which terminates at the red beacon light, is not clear. We do not even know whether it was in fact built on the ancient port construction. We wonder whether these foundations extend from the tower we referred to earlier, which certainly was used for the reinforcement of the port, or whether instead there was an opening serving as an entrance for ships. The question of the probable existence of some ancient construction underneath the present-day northern pier, as well as the breakwater, which has been located outside it (Fig. 12), will be the subject of research.

The breakwater is built of medium-sized unworked stones and one section has been found to the NE on the axis of the centre of the eastern tower at a distance of *c.* 50 m, and the other section continues to the west for 200 m at a slight angle to the first section. The wall is built of worked stone blocks on its two faces, between which there is a filling of small unworked stones, reinforced now and then by a change to transverse blocks.

The port was built on dry land, as is shown by the method of its construction which differs significantly from that observed at the harbour of Amathus, where the blocks were placed in the sea [*IJNA* **16** (1987): 11; fig. 8]. On the inner side of the northwestern section of the closed port, we opened a trench to a depth below the embankment of the wall, where we found many sherds of amphorae dating from the end of the 4th century BC, which gave the chronology of the wall. This shows that the closed port was built immediately after the destruction of the archaic port.

A great deal of rubbish is always found in a harbour, thrown from ships or from the piers. So

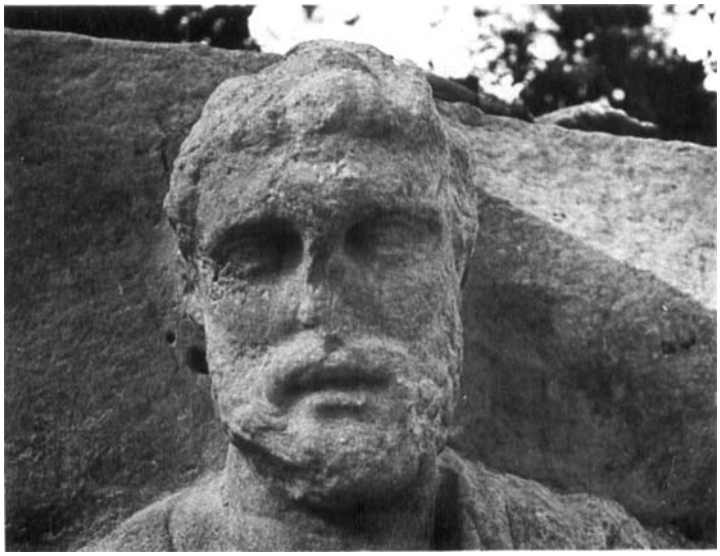

Figure 13. Funerary stele of warrior (photograph by P. Vetzitzis).

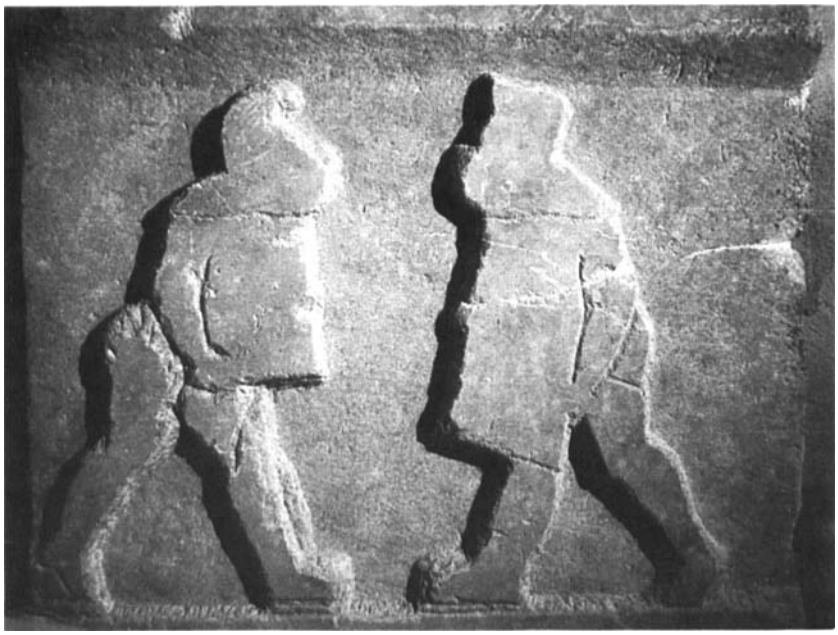

Figure 14. Metope with warriors fighting (photograph by P. Vetzitzis).

we were lucky enough to raise from the sea a very important inscription which gives much information about the topography of the town and dates from the middle of the 5th century BC. We also dredged up many sherds dating from archaic times to the Turkish occupation, as well as some beautiful sculptures such as the funerary stele depicting a warrior (Fig. 13) and two half-finished metopes from Roman times which show warriors fighting with swords (Fig. 14).

Inscriptions indicate the existence of three ports in the town of Thasos, which the small boats or ships could use according to their size. Our studies have revealed two of these ports: the 'closed' port and the 'commercial' port, lying to the east of it, but we did not have time to discover the third.

In 1988, we will finish the salvage excavations of the 'closed' port of Thasos, especially its eastern section where we still have many queries.

Note

[1] For a first excavation report, see *BCH* **111** (1987): 622–6.