

The 'Harbour' at Halieis

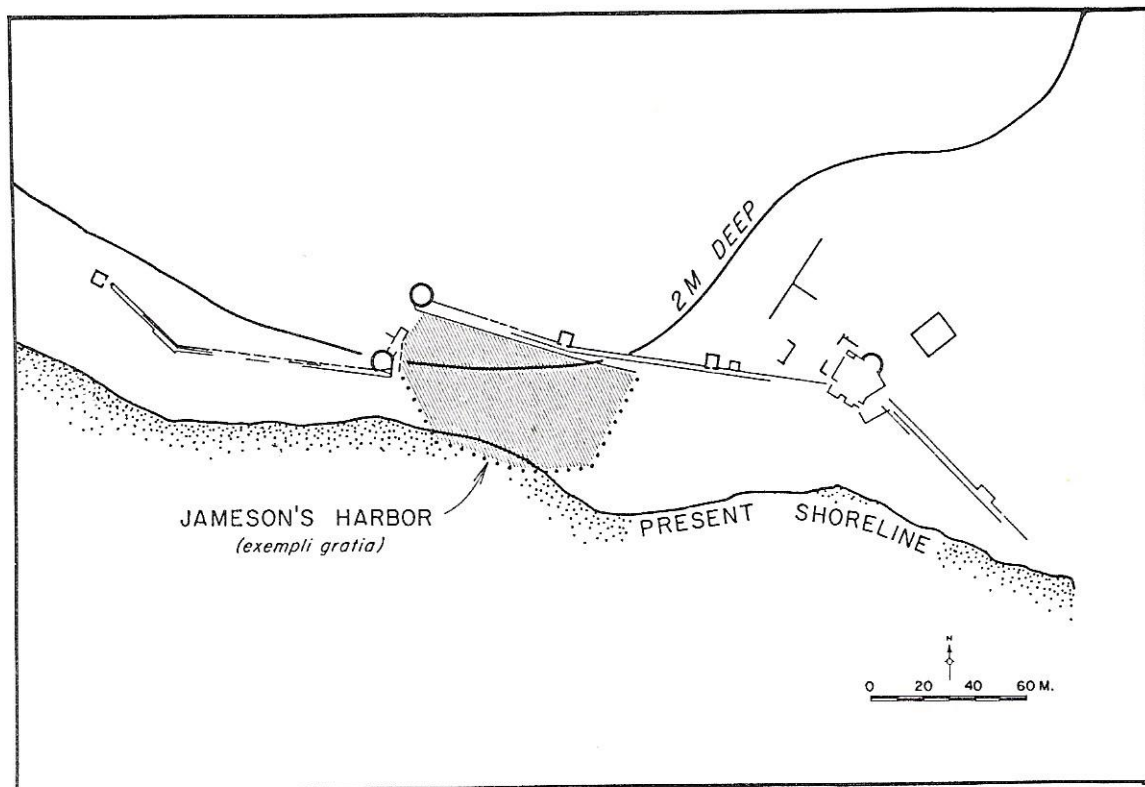
According to ancient literary testimony, the Greek polis of Halieis was founded shortly after the Persian Wars by refugees from nearby Tiryns following the capture of their city by Argos¹. Halieis was never more than a pawn during the power struggles of the fifth century B.C.E. but because of its strategic location in a sheltered bay it more than once was contested by the Athenians and the various Peloponnesian allies of the Spartans. It is ignored by the historians of the fourth century and Pausanias, writing in the second century C.E., claimed that it was deserted in his day².

Beginning in 1962 archaeologists from the Universities of Pennsylvania and Indiana began to reconstruct the sketchy history of Halieis from the archaeological evidence³. By 1965 they had made a respectable start of excavation on the acropolis and had traced the main outlines of the fortifications on land. By that time it had become obvious that much of the city extended out into the shallow water of the bay and for that reason Professor David Owen and myself were invited to conduct a mapping survey of the underwater ruins. Using the simplest methods — stakes and tape measures — we were able to draw a map that revealed the general outlines and extent of a half kilometer of walls, streets, and houses. But because of the inaccuracy inherent in such a hasty survey and because of our suspicion, based on sub-bottom probing, that there were far more walls than appeared above the sea bottom, it was decided to continue the underwater survey in 1967 and 1968 with far more resources and manpower.

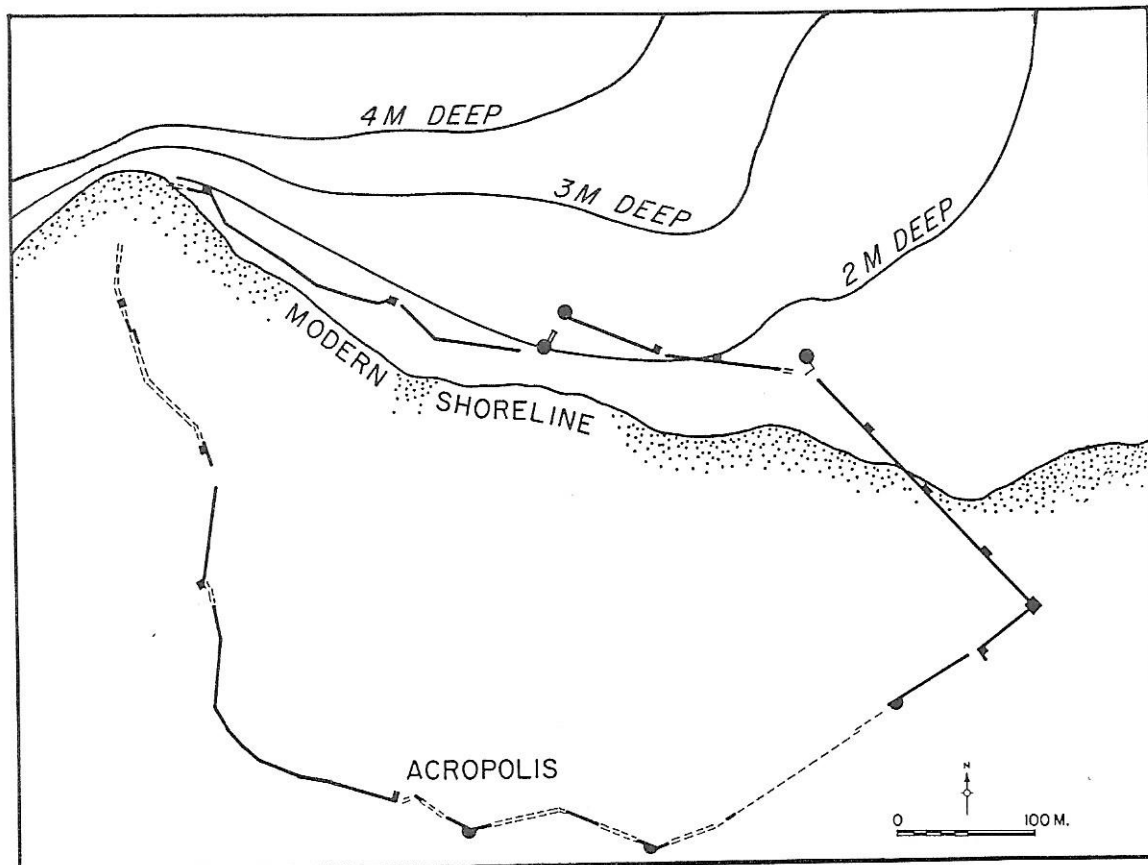
Using SCUBA and various dredging devices, the excavators greatly extended the line of the outer fortification, including two towers forming a wide gate in the western quarter of the city. The map was redrawn, based on aerial photogrammetry from tethered balloon. In 1969 Professor Michael Jameson published the results of six years of excavation in *Hesperia*⁴. Halieis proved to be a most instructive archaeological site because with a very few exceptions it had not been built upon after its decline during the Hellenistic period. Only a few Roman and Byzantine structures contaminated the original city plan of the classical era.

As we all know, shallow water ruins are notoriously difficult to interpret. The lack of any reliable stratigraphy is only one of many problems. The excavators of Halieis had one major puzzle in the vicinity of the twin towers. There appeared to be a space inside the walls approximately one hundred meters long by forty meters wide in which there were no traces of building of any kind. Because the water is also slightly deeper in this part of the plan, Jameson and staff architect Marian McAllister eventually concluded that the twin towers were actually the entrance to a small, shallow, enclosed harbour. Herodotus (7.137) had reported that a Spartan commander had captured Halieis, sailing in with a merchant ship loaded with soldiers. An inscription of the Archidamian War had been restored to show that Halieis had agreed to supply the Athenians with a *naustathmos*⁵. The existence of a harbour seemed justified by both literary evidence and archaeological reconstruction. Finally, a curious foundation projecting between the two towers served as the basis of a conjecture by McAllister that the harbour entrance had been closed by a log boom pivoting on the projection. The "harbour" theory was published in the 1969 report and has been the accepted reconstruction since that time⁶.

I have never been convinced that there was an enclosed harbour at Halieis. My doubts began as long ago as 1965 during the first survey; after I had swum across the area hundreds of times the location simply didn't *feel* like a harbour to me. I take this opportunity to offer a few more conventional objections to the harbour theory. This criticism in no way affects my high estimate of the Halieis project over the years, which is a model of careful, systematic, and sophisticated



Reconstruction of the "harbour" as proposed by Jameson. The drawing is based on Fig. 6, *Hesperia* 38 (1969), p. 327.



The Halieis area showing the present shoreline and offshore depth contours.

archaeological excavation and reconstruction. The “harbour,” however, is a major conjecture and if it is to stand in the final publication it needs to be tested and defended with more rigour than it has been so far.

The sea level at Halieis has risen at least two meters since antiquity, to judge from a number of structures whose foundations were once undoubtedly on dry land and are now nearly at that depth. An approximate minimum rise of sea level of the same degree can be documented at nearby ancient sites at Hermione, Skyllaieis, and Epidauros⁷. It is more difficult to deduce a maximum rise of sea level. N. Flemming once estimated nothing deeper than 2.7 m in the area but more recently has suggested a five meter change at Halieis⁸. This would make a harbour inside the walls completely impossible of course but I do not believe such a drastic change in sea level can be accepted without the evidence of ancient structures. A rise in sea level between two and three meters is the most conservative estimate.

The basin in which Halieis lies is a shallow limestone depression covered with a thin layer of quaternary deposits. Except for a few outcroppings the deposition of sediments is rather uniform and the contour map shows the angle of slope into the basin to be regular. A projection of these contours seaward of the present shoreline, based on the soundings from British and Greek charts, immediately reveals difficulties for the harbour theory. If the sea level has risen two meters then only a narrow triangle would have been underwater in antiquity. I do not believe that excavators have appreciated this difficulty. In the 1969 *Hesperia* article the outlines of the “harbour” are reconstructed as follows:

The mole carrying the city wall to the north tower formed the northern limit of the harbor... The eastern limit is not so obvious. No building that is certainly of classical date has been found west of the Hermione gate... About 22.20 m. to the west of the same tower the poros retaining wall of the mole comes to an end. We should perhaps conceive of the natural beach as the harbor edge on this side. It is possible that the south shore of the harbor is in fact in the flat field along the shore. The resulting harbor is roughly 100 m. east to west, and a minimum of 40 m., north to south. By any standard this is small, but sufficient to provide shelter for several friendly warships (*Hesperia* 38, 337).

It is apparent that a conjectural harbour fitting this description makes a drastic dent in the present topographical contours. Such a small, anomalous inlet could not have occurred naturally by any known principle of geomorphology and would therefore have had to be dredged out, particularly along its south edge, where the field at present meets the water's edge with a low bank about a meter high. Once dredged, a narrow cul-de-sac like this would have immediately started to silt up. In fact, during the late 1960's when I questioned the excavators about the harbour theory, asking them to explain why the present contours do not support a harbour as postulated, they responded that the harbour had since silted up⁹.

Nor can I agree that the harbour would have been useful for triremes. We know that naval commanders liked to beach their ships, even overnight if possible, to prevent them from becoming waterlogged¹⁰. If there had been a shallow, triangular intrusion along the outline of the present two-meter contour, it would have provided a far more suitable shelter — one with an easy access through knee-deep water to a dry beach. Of course, such an entrance would not have kept anyone else out either, like a troop of infantry that didn't mind wet feet. But we cannot pretend to know the strategic considerations that weighed most heavily with the architects of Halieis; its role in the struggle between Athenians and Spartan allies is mentioned only in passing a handful of times over the course of more than fifty years¹¹.

Finally, so far as I know. Greek fortification architecture offers us not a single other example of either a long straight outer wall with its footings underwater, or an enclosed harbour of Halieis's type. Archaeology should be a conservative discipline and the very first example of a hitherto unknown type of architecture should be more precisely documented.

I would suggest instead that what is thought of as the harbour at Halieis is actually the entire bay and that the normal location of the many fishing boats with which the inhabitants made their living was along all the shallow shores of the bay. If, under treaty, the locals provided a station for Athenian triremes these would have been reasonably secure hauled up outside the walls as well; Halieis is a long and difficult march by land from the territories of the Athenian foes, Corinth and Epidauros, and during the period of the treaty the Athenians ruled the sea and would not have feared an attacking fleet. As for the space inside the walls I have always believed that it was the marketplace, situated in a logical, central location, between two gates and at the terminus of several main roads. This reconstruction may have as little to support it as the harbour theory. I merely propose that more investigation of this disputed area is necessary before the word "harbour" is irrevocably printed on the final publication.

NOTES

1. Herodotus 7.137; Strabo 8.6.11; Ephorus, in Stephanus of Byzantium s.v. Halieis (F. Jacoby, *Fragmente der griechischen Historiker* 70 F 56).
2. Pausanias 2.36.1.
3. *Archaeological Reports*, 1962-63, 16f.
4. "Excavations at Porto Cheli and Vicinity", *Hesperia* 38 (1969), 311-42.
5. *Supplementum Epigraphicum Graecum* 10 (1949), 80.6, 23.
6. Wolf W. Rudolph, *Hesperia* 48 (1979), 296, note 3; Raymond V. Schoder, *Wings over Hellas* (New York, 1974) 87; see the plan and boom reprinted in D.J. Blackman, "Ancient Harbours", *International Journal of Nautical Archaeology* 11 (1982), 91, where, unfortunately, the wrong scale has been printed, making the walls and the towers truly Brobdingnagian.
7. N. Flemming, "Holocene Earth Movements and Eustatic Sea Level Change in the Peloponnese", *Nature* 217 (1968), 1031f.; F.J. Frost, "Phourkari", *IJNA* 6 (1977), 233-28; for the location of Skyllaieis at Phourkari, see Frost, *AJA* 84 (1980), 186-88.
8. N.C. Flemming et al., "Archaeological evidence for eustatic and tectonic components of relative sea level change in the South Aegean", in D.J. Blackman, ed., *Marine Archaeology* (London, 1973), 7.
9. On siltation, see Blackman, *IJNA* 11 (1982), 199, 202.
10. E.g., Thucydides 7.12.3-4; Herodotus 7.59; Xenophon, *Hellenica* 1.5.10.
11. Herodotus 7.137; Thucydides 1.105.1, 2.56.4, 4.45.2; Diodorus 11.78.1. Athenian casualties at Halieis are listed in *Inscriptiones Graecae* i² 929.