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SEBASTOS
Herod's Harbor at Caesarea Maritima

by Robert L. Hohlfelder, John P. Oleson, Avner Raban, and R. Lindley Vann

In the year 22 B.C. or shortly thereafter, at a point approximately midway between modern Haifa and Tel Aviv, Herod began construction of his magnificent new metropolis, Caesarea Maritima, and its unparalleled port facility, Sebastos. The location selected for Caesarea and Sebastos offered innumerable natural problems. There were, for instance, an unstable coastline and an inadequate supply of drinking water; in addition, a current running from south to north along the shore (a longshore current) constantly carried a great deal of sediment. Despite these problems the engineers in Herod's service worked quickly and with consummate skill. By about 10 or 9 B.C. the city and its harbor were completed.

Because of the size and grandeur of Sebastos, Caesarea Maritima immediately became a major international emporium in the eastern Mediterranean—a role it was to maintain intermittently for the next 600 years. Sebastos itself had technological features found nowhere else in the world. At the time of its completion it was not only the largest Levantine harbor but also one that showed a maritime engineering sophistication that can only be called modern.

Josephus on Sebastos

We are most fortunate to have a detailed description of the city and port in the writings of the historian Josephus. Although he wasn't born until about 37 A.D. and therefore wasn't a witness to the actual construction of Caesarea and Sebastos, his texts provide a vivid and fairly complete picture of the major features of both (*The Jewish War*, I.408-414; *Jewish Antiquities*, XV.331-341). He records a range of municipal and civic structures common to a major Roman city and provincial capital. The most important section of his description, however, is on the construction of Sebastos, which he calls the most impressive architectural feature of the new city. He tells us that the engineers literally had to carve this facility from an uncompromising coastline that was devoid of any significant topographical features such as a cape or bay—features that up until that time had been prerequisite for a harbor site. The building of Sebastos was also impeded by frequent, heavy storms that plagued that part of the Levantine coast. Moreover, the strong, sand-laden longshore current assured that erosion and siltation would be problems.

Aerial view of Sebastos from the west. The dark areas in the foreground are the submerged remains of the two large breakwaters ("enclosing arms") that formed the harbor. The modern harbor, shown in the upper right, is much smaller than the ancient one. Photograph is used courtesy of Caesarea Museum of Kibbutz Sdot Yam.

A roughly circular harbor was created by extending two breakwaters out from the shore, which runs north-south. The south breakwater initially ran due west but curved to the north at its seaward end. The smaller and shorter north breakwater extended out straight west to about 20 to 30 meters from the end of the south breakwater. The entrance to the harbor was thus from the north.

These two "enclosing arms" were actually composite structures (and the discussion of them can sometimes be slightly confusing because the term *breakwater* is also applied to one part of the composite). According to Josephus, the two arms (or at least the main, southern one) were built by lowering huge stones 50 feet long, by 10 feet wide, by 9 feet deep and larger into depths of 20 fathoms. When a platform 200 feet wide finally stood above the surface of the sea, it was then divided into sections. The seaward or southwestern-western face, with a width of 100 feet, was left as a breakwater *(prokumatia).* A wall adorned with towers seems to have run the length of the arm. The inner portion of this wall apparently contained various support buildings constructed into it. The landward (or inner) component of the arm was finished as a loading quay, which Josephus assures us was a pleasant place to walk.

At the entrance to the harbor there stood six colossi, three on either side. The three statues to the east (the port side for entering ships) stood on a huge tower. The ones to the west were supported by two upright stones.

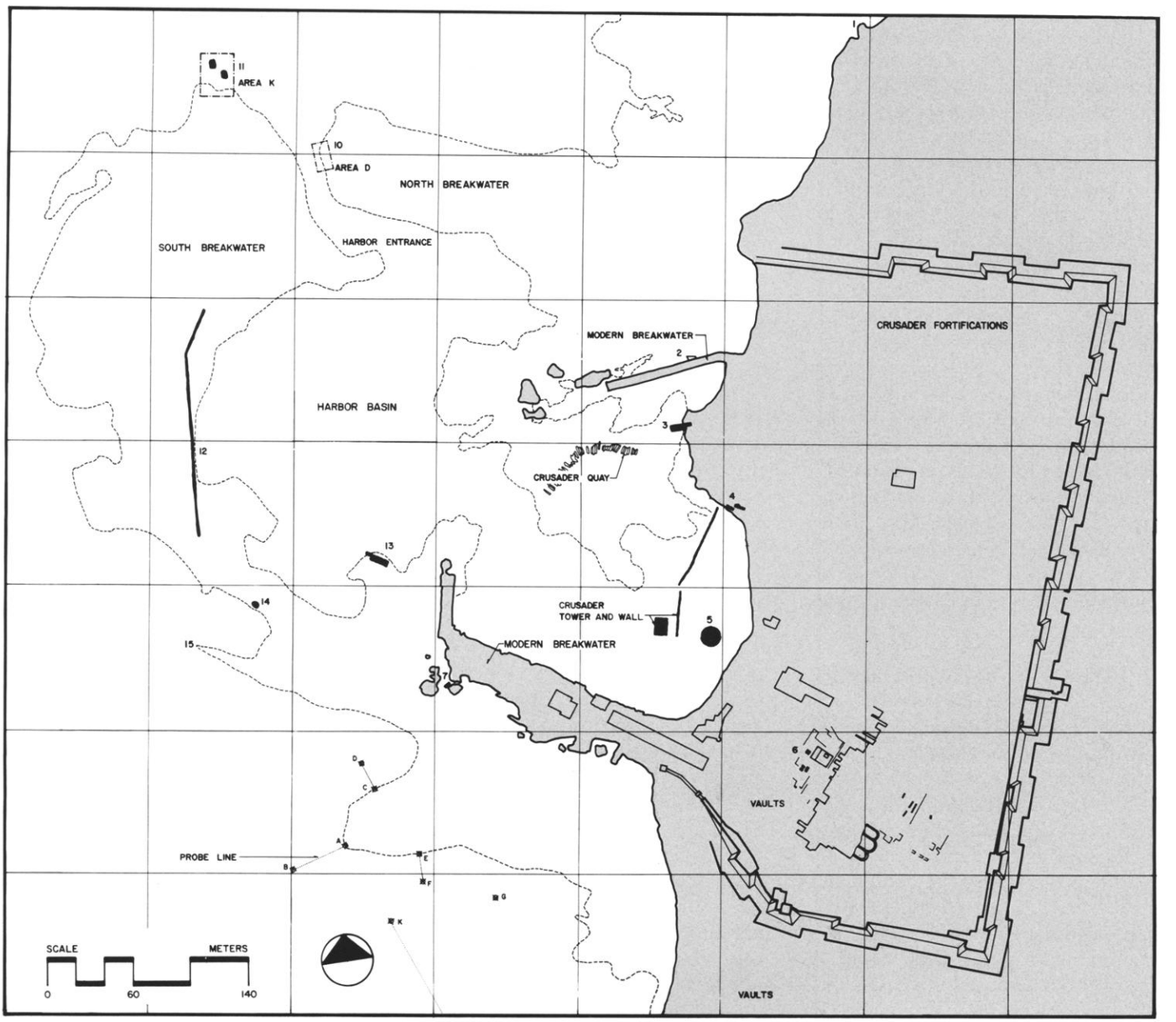
This description provided by Josephus is the only eyewitness account of an ancient harbor on the Levantine coast that has survived and is one of the most detailed among the very few that reach us from all of antiquity. Its credibility, however, would seem to be partly questionable. The engineering feats recorded by Josephus (for instance, the lowering of huge stones into open water) could easily be challenged by scholars. No earlier examples of such advanced technology are known. There also was no way Josephus could have checked the oral accounts or written reports of the harbor construction; nor would he have examined the configuration of the undersea sections of Sebastos. Yet it appears from the results of recent excavations that his descriptions are remarkably accurate, excepting his overestimate of water depths in the harbor (5 to 10 meters and not 20 fathoms).

Josephus' description of Sebastos is the only surviving eyewitness account of an ancient harbor on the Levantine coast.

Underwater Explorations and Their Results

Underwater explorations of the submerged sections of Sebastos began in the summer of 1960. During June of that year a pioneer effort in the field of maritime archaeology was undertaken. Edwin Link formed a team of professional divers under the direction of Charles T. Fritsch and Immanuel Ben-Dor to begin the systematic investigation of structural remains off the coast of Caesarea. Using as a base a vessel (the Sea Diver) built specifically for oceanographic research, the Link expedition achieved several significant results which were reported to the readers of **BA** in 1961 (Fritsch and Ben-Dor 1961). For the first time, the precise location of Sebastos was firmly established. As recently as 1950 the large bay to the south of the Herodian harbor complex had been identified as Sebastos itself (Reifenberg 1950-51). Preliminary dimensions and assessments of the configuration of the port had also been advanced. Fritsch and Ben-Dor, who were not divers themselves, were restricted in their study of the actual submerged remains. On the basis of divers' reports and artifacts recovered, they postulated that the harbor complex had been damaged by an earthquake early in its history (A.D. 130) and perhaps had not been rebuilt. Such an analysis accorded well with the testimony of Procopius of Gaza, who had reported early in the sixth century A.D. on the ruinous state of the harbor facilities prior to that time and on a renovation of Sebastos by the emperor Anastasius probably shortly after A.D. 502 ("Panegyricus in Imperatorem Anastasium" in *Patrologiae Cursus Completus, Series Graeca Prior,* vol. 87, pt. 3, pp. 2817-18).

Further underwater investigations on the site were conducted by the Undersea Exploration Society of Israel and the Center for Maritime Studies of the University of Haifa in the 1960s and early 1970s. The most significant of these efforts was an extensive coastal survey conducted in 1975 by the Center for Maritime Studies under the direction of Avner Raban (Flemming, Raban, and Goetschel 1978). The data collected during this research indicated the presence of at least one major fault line off the coast of Caesarea, about 150 meters from the present shoreline and west of the terminus of the modern south breakwater. Tectonic activity along the coast of Israel over the many centuries since the construction of Sebastos has resulted in the compaction, slumping, or subsidence (that is, sinking) of 5 to 6 meters for all of the struc-



Plan of the harbor complex at Caesarea Maritima.

tures seaward or west of this fault line. To the east, the process appears to have had negligible impact. This subsidence, and not a major increase in sea level since antiquity, is responsible for the submergence of significant sections of Sebastos. As we shall see, the ancient engineers could and did anticipate many of the natural problems inherent in the site that Herod selected for his city and its harbor. There was no way, however, that they could have known of the existence of a fault line bisecting the chosen location of Sebastos. Its presence doomed the ancient harbor from the moment of its completion. Within decades, sections of it began to sink beneath the waves.

A final preliminary reconnaissance of the submerged sections of the harbor facilities was undertaken in 1978 for the Joint Expedition to Caesarea Maritima in conjunction with the Center for Maritime Studies. This survey confirmed points of archaeological interest and identified locations for future excavation (Hohlfelder and Oleson 1980).

In 1979 the Caesarea Ancient Harbour Excavation Project (CAHEP) was initiated by Avner Raban and Elisha Linder, also of the Center for Maritime Studies, to complete the systematic explorations of all of the maritime

facilities. The University of Colorado joined that season as an institutional member with Robert L. Hohlfelder serving as co-director. In 1980 and 1981 excavations were conducted at various locations within the Herodian harbor complex. During the 1981 season John P. Oleson of the University of Victoria also served as a co-director of field work. R. Lindley Vann of the University of Maryland joined CAHEP as the project's architect. Both of these universities became institutional members of CAHEP in the spring of 1982. CAHEP continues to operate under the aegis of the Center for Maritime Studies with Avner Raban of that institution serving as project head. The following is a brief report of some of the results of this consortium's investigations of Sebastos through the 1981 season.

The Design and Construction of Sebastos

Explorations of the submerged structures of Sebastos and related coastal buildings have confirmed the essential accuracy of the accounts of Josephus. Although his descriptions are incomplete in numerous aspects, the details and the overall view that he provides are not inconsistent with the emerging archaeological record.

The master plan of Sebastos, however, is far more complex than Josephus suggests. The harbor described by him is but one component of an extensive facility. Land excavations conducted by Avner Raban within the Crusader fortress, east of the present shoreline about 80 meters, and at the base of the podium of the Augustan temple, uncovered the vertical face of an ancient seawall (see harbor plan and plan of south bay, number 6). The blocks of this wall are distinguished by the presence of marine life to a height of about 0.20 meters above the present sea level. Data from this probe, including carbon-14 dating of organic marine life uncovered, indicate that at the time of the construction of Caesarea Maritima, the Mediterranean Sea extended east to the point of this trial trench. This seawall, which exists at the foot of a stairway leading down from the Augustan temple, was probably the eastern segment of an inner basin not mentioned by Josephus but connected to the harbor he describes by a channel (Raban and Linder 1978).

There was probably an inner harbor, not mentioned by Josephus but connected to the harbor he describes by a channel.

The western limit of this enclosed facility was also uncovered by investigators from the Center for Maritime Studies and confirmed by CAHEP. Approximately 100 meters west of the test trench in the inner harbor and 20 meters from the present shoreline, a circular tower of ashlar blocks was discovered in about 1 meter of water (see harbor plan, number 5). From its design, the materials used for its construction, and the ceramic material found during underwater excavations around its lower courses, the tower appears to predate Herod's metropolis and can best be associated with an earlier settlement known to have existed along this section of the Levantine coast, a settlement identified by Josephus as Strato's Tower. It seems likely that this circular tower, and a north-south seawall that must have been associated with it, provided the western definition of the inner basin.

The entrance to this secondary harbor was immediately to the south of the tower through a channel 20 to 30 meters wide and possibly even wider. While the tower marked the northern limit of the mouth of the basin, the southern terminus was the large promontory in whose lee the inner harbor had been constructed. It is possible that this enclosed basin still existed late in the first century B.C. and perhaps provided one of the reasons this particular section of coastline was selected by Herod for his new city.

How long the inner harbor was used cannot yet be ascertained. It would appear from the pottery finds in the test probe along the podium that the basin enjoyed a short life. Pottery from the Late Roman and Early Byzantine periods of Caesarea's history was found in the upper strata of the trench. It may be that the whole basin had been filled in deliberately during the Roman era or allowed to silt up over the years. Roman Caesarea had no need for the vast harbor complex of the Herodian city. Herod's idea that the city should be the emporium for all eastern trade was not shared by the Romans (Hohlfelder and Raban 1981). The outer harbor and the secondary anchorages north and south (which are discussed below) would have been sufficient for the needs of the Roman city.

The original size and design of this inner basin can only be conjectured. To ascertain its dimensions, extensive excavations would have to be undertaken at various points within the inner harbor. Since numerous shops and restaurants for tourists are now in the locations where such excavations would have to be conducted, such an archaeological survey is impossible at present. All one can do is estimate the working space of the enclosed harbor based on the natural configuration of the coastline and the presence of ancient structures from

To the left of this photograph by Robert L. Hohlfelder is the Crusader quay, which was constructed of Roman columns. In the foreground are the remains of a Roman pier.

earlier excavations. If its shape were rectangular, which is most likely given the features of the immediate area, the inner harbor would have had approximately 10,000 to 15,000 square meters of working area.

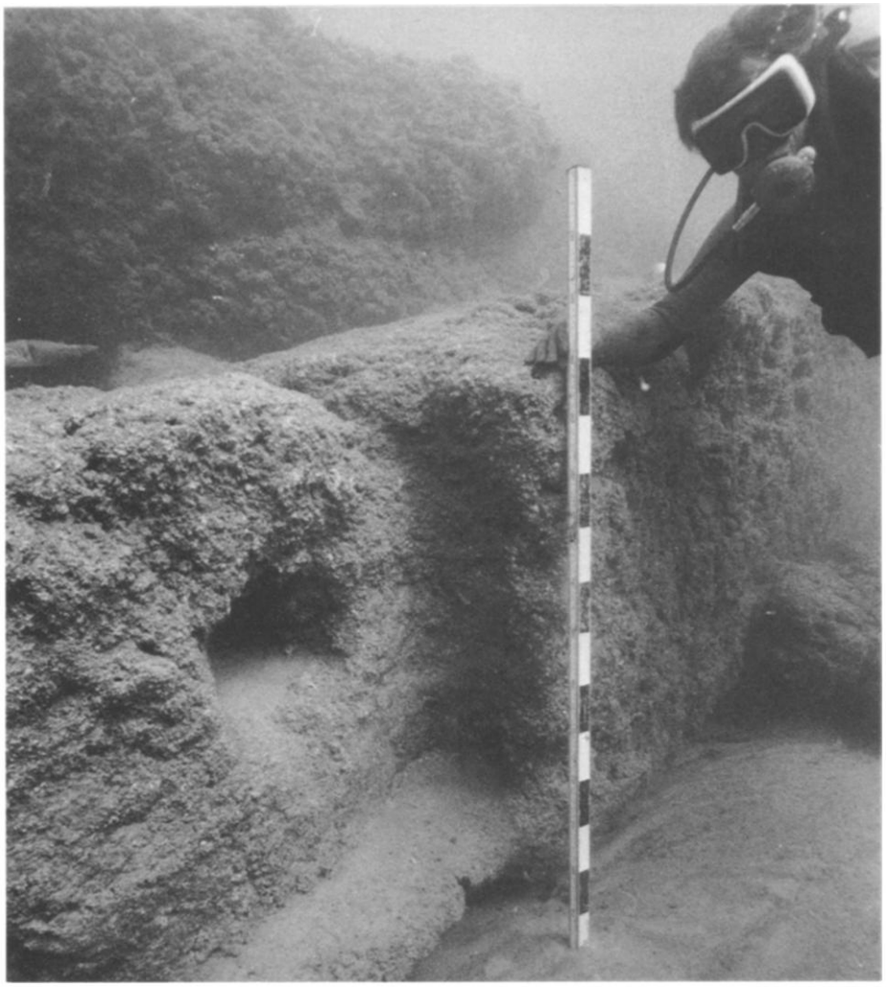
Immediately to the west of this inner harbor is another basin within the outer harbor described by Josephus. It appears to have been an ancient river outlet. The area of this basin now serves as the modern anchorage and is defined to the south by the same large promontory mentioned above and to the north by a Crusader quay constructed of Roman columns on a coastal shelf. This Crusader quay extends east to west and then turns to the south for a distance of over 80 meters. The eastern definition of this basin in Crusader times was a north-south wall about 5 to 6 meters in width, which ended in a square tower approximately 20 meters west of the circular one. This square tower, directly to the north of one built on the promontory, may also have marked the entrance to some small inner mooring area within what had been the larger Herodian inner harbor. If so, it is likely that a chain would have been extended between the two towers during times of danger to deny seaward entry to the fortress the harbor served.

The promontory that marked the southern limit of both the intermediate basin and the inner harbor is the largest natural feature along this section of the Levantine coast. It may originally have served as the locus for the tower or lighthouse of Strato's Tower and most certainly served as the final defensive position for the Crusaders of Caesarea. During this later era, and perhaps before as well, the promontory had been separated from the mainland by a channel or moat cut north-south. In Crusader times this channel served to isolate the defenders on the promontory from attackers who had breached the fortress's outer defenses. Earlier, such a channel would have served a very different purpose. It would have been part of a system to allow silt-free water to flow into the harbor complex and deter the building up of sediment.

Evidence of at least one other channel has been found, presumably cut through the promontory at the time of the construction of Sebastos (see harbor plan, number 7). This channel contains grooves cut into the rock to hold wooden sluice gates that would have controlled water flow.

All such channels were designed to catch the crest of breakers smashing against the southern face of the promontory and control the entry of this "surplus" water into the harbor complex. This water would flow towards the entrance of the outer harbor, creating a current within the facility that thereby retarded the silting process. Thus, during appropriate sea conditions when waves were high, the harbor could be flushed or cleansed of silt and probably flotsam as well. Similar systems within closed basins were common to other Levantine ports constructed as early as the Hellenistic Age (Raban 1980).

The main component of Sebastos was the outer harbor, the facility described in detail by Josephus. The main, or south, breakwater was constructed from the tip of the southern promontory west and north for a distance of about 480 meters. Its original width appears to have been approximately 40 meters at its southern segment where it joins the promontory. At its widest, it seems to have been over 60 meters,



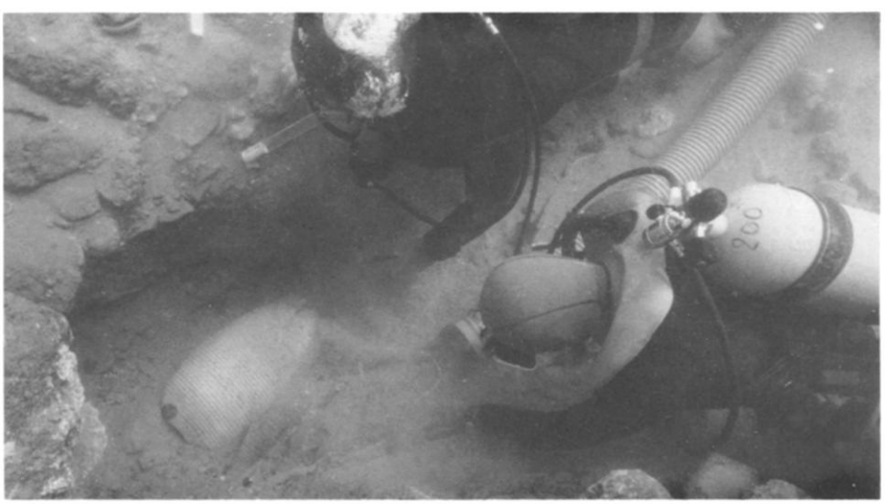
Large block found on the eastern side of the entrance to the ancient harbor (at the seaward end of the north breakwater). This block has metal fasteners and an unusual L shaped cutting that contains a hemispheric depression. Photograph is by Harry Wadsworth.

although at its northern terminus its ancient configuration may have been even wider. This end is today obscured by considerable rubble and tumble from structures that once stood there.

CAHEP's investigations have revealed the existence of an inner quay that has been traced for over 150 meters (see harbor plan, number 12). Although only the lowest course of the quay is still in situ (the upper courses of facing stones were robbed during the Crusader era when a slightly lower sea level facilitated such an activity), it is possible to estimate that the width of this structure was about 10 meters and that it probably stood from 1.00 to 1.50 meters above ancient sea level. There is also evidence of at least one rectangular loading platform constructed from the breakwater itself, obviously intended to increase the amount of docking space afforded within the outer harbor (see harbor plan, number 13). Another secondary jetty or loading platform has also been discovered extending into the harbor from the ancient shoreline (see harbor plan, number 3).

The external or seaward face of the south breakwater consists of several courses of ashlar blocks in stepped revetment surmounted by huge concrete monoliths, some in excess of 50 tons and exceeding the dimensions for such blocks offered by Josephus. It is not yet certain if these concrete blocks were moved into position and lowered into the sea, poured in place on the breakwater and then slid onto the foundation courses, or poured into wooden construction frames that had been sunk beneath the sea and allowed to harden under water. These concrete structures appear to be located on the breakwater at the point of greatest stress—that is, where storm and winter seas would inflict the most damage (see harbor plan, number 14).

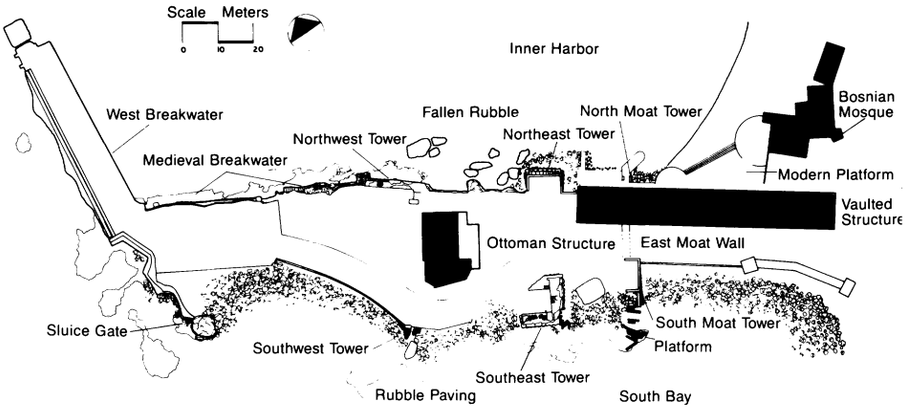
These concrete blocks no doubt composed the *prokumatia* mentioned by Josephus. Between this external face and the inner quay would have been the wall with towers into which various support buildings had been constructed. Huge quantities of building stones and rubble, sometimes rising almost to the surface from the ocean floor about 9 meters be-



Members of the staff of the Caesarea Ancient Harbour Excavation Project (CAHEP) are shown here at work. The lower diver is using an airlift. Photograph is by Harry Wadsworth.

low present sea level, obscure the midsection of the breakwater. No traces of the structures mentioned by Josephus have yet been uncovered, but their presence is suggested by the amount of building debris in the area. In particular, the northern terminus of the south breakwater is distinguished by many large building stones and blocks and is considerably wider than other segments of this enclosing arm. It seems quite obvious that impressive structures of as yet undetermined nature stood there. Future investigations in this area will attempt to recover a plan of the breakwater near its terminus.

Two other features of the breakwater design should also be mentioned. Before construction began, a foundation layer of rubble, sometimes as much as 0.80 meters thick, was laid on the sandy ocean floor to stabilize the breakwater and to prevent its undercutting by wave action. In addition, a secondary or subsidiary breakwater was constructed seaward or west of the main one, running parallel to the main structure's outer face for an undetermined length. It exists along the curve of the south breakwater at the point most vulnerable to damage from winter storms (see harbor plan, number 15). This secondary structure was about 5 to 6 meters wide and was made up of courses of blocks and rubble laid on a foundation like the one below the main breakwater. Investigations to date have revealed no connecting



Plan of the modern south breakwater.

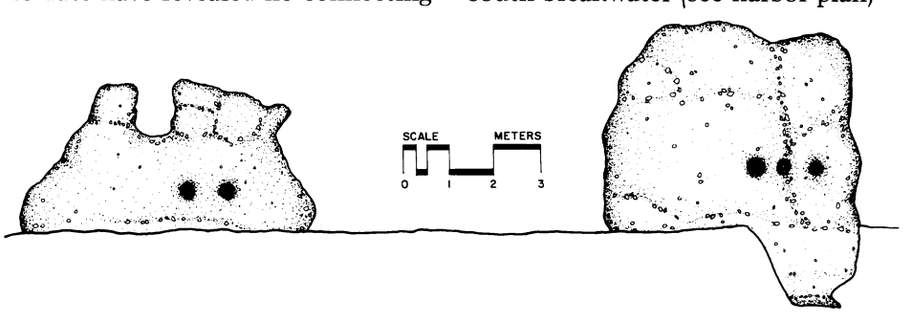
walls between the two breakwaters. They were constructed independent of one another and apparently were intended to function that way as well.

The purpose of the secondary structure appears to have been to provide further protection from storm damage to the main breakwater. It served to dissipate the force of storm waves before they struck the external face of the south breakwater. It also would have reduced significantly the amount of spray that washed over the *prokumatia* and adjacent wall onto the storage facilities. If so, perishable cargo could have been stored with more confidence in these buildings during all seasons, and perhaps this permitted the loading of merchantmen in the winter.

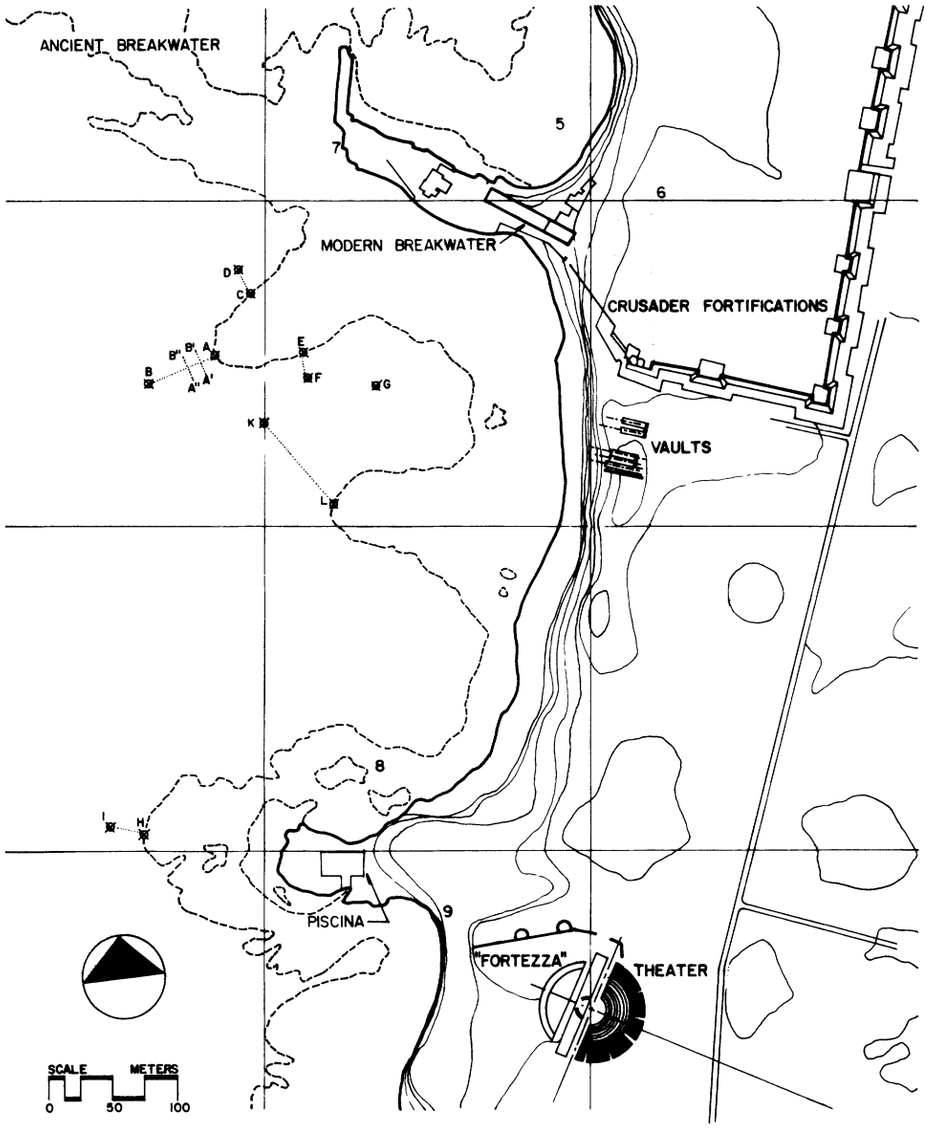
Near the entrance to the harbor along the northern face of the south breakwater (see harbor plan, number 11), two concrete islets were discovered. Excavations around the base of both of these structures in 1981 revealed the negative impression of the wooden crossbeams that braced the construction frames. One of these islets features two large projections from its upper surface separated by a large grove. Perhaps these two projections once held the base of one of the colossi mentioned by Josephus as having adorned the harbor entrance.

Whether or not the islets did support statues, it does seem likely that they delineated the western side of the harbor entrance. If so, the entry channel to Sebastos would have been about 20 to 30 meters wide rather than the approximately 12 meters it is today. The larger width would have been necessary to accommodate the large ships of the Roman fleet. The actual size of the harbor mouth has been reduced over the centuries by the tumbling rocks and rubble from the structures that stood on the terminus of the south breakwater.

The other enclosing arm of Sebastos' outer harbor has been designated the north breakwater. Its configuration is far more regular today than the south breakwater and probably approximates its ancient form. To a great extent its superior state of preservation is because it has always been in the lee of the



Plan of two concrete islets adjacent to the western side of the entrance into the ancient harbor (on the northern face of the south breakwater). These may have supported the base of one of the colossi mentioned by Josephus.



Plan of the south bay. Jet-probe lines are indicated.

south breakwater and is thus less subject to damage from the south-southwestern storm seas. As a consequence of its more protected position, simpler building techniques could have been used and apparently were. It seems to have been constructed of stones and rubble; none of the more sophisticated maritime technology in evidence on the south breakwater is apparent.

This breakwater protrudes from a natural rock shelf north of the Crusader column-quay for a distance of about 280 meters; its average width is approximately 60 meters. No traces of structures for most of its length have been uncovered. It may be that none existed or that their remains were obscured by later Byzantine repairs.

At its terminus, however, a significant building once stood. Numerous massive stone blocks, some with lead/iron projections or grooves to receive these features, have been uncovered. At least two of these blocks also feature an unusual L-shaped cutting which contains a hemispheric depression. The exact function of these building stones and their exceptional members is unknown. It is clear, however, that a large building of some kind once adorned the end of the north breakwater, one that eventually toppled seaward, or west, during an earthquake. Perhaps these blocks were once part of a lighthouse, although such a structure is not mentioned by Josephus. This section of the breakwater will receive further attention in future seasons of excavations.

The Secondary Anchorages of Sebastos

Josephus also speaks of secondary anchorages at Caesarea Maritima but does not indicate their nature, extent, or locations. One such anchorage was clearly the area to the south of the inner-outer harbor complex, a natural bight designated as the south bay (see the accompanying plan). It is bounded on the north by a jetty extending from the promontory that delimits the inner-outer harbor complex and on the south by a headland that is distinguished by a massive *piscina* (or fish tank) and extensive evidence of quarrying in antiquity; the distance between the jetty and the *piscina* is about 450 meters. Underwater investigations conducted in 1981 conclusively proved that this bay never contained harbor facilities or other maritime structures. Rather, it appears that the south bay simply served as a natural anchorage throughout the long history of Caesarea Maritima, although at various times in antiquity, quantities of stones and rubble appear to have been dumped on both the jetty and headland to augment the natural protection afforded by these features.

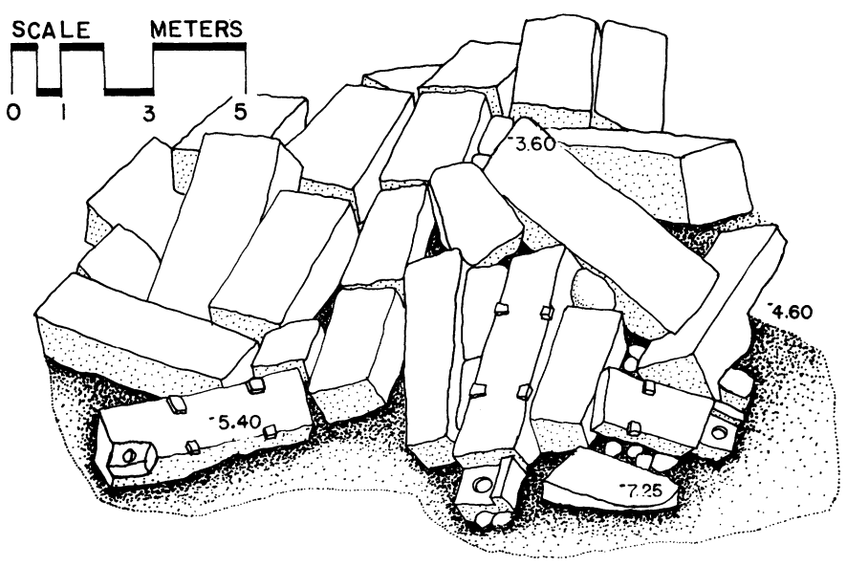
The bay itself was actually divided into two smaller coves in ancient times by a rock shelf. Both of these smaller coves served as anchorages during suitable sea conditions. When the sea was calm, ships could have moored safely in either one. When prevailing winds were from the north, the one in the lee of the promontory could serve as anchorage. If the winds blew from the south or southwest, the

other cove would have provided a safe haven.

Although it is possible that lighters were used to off- and on-load ships that used these anchorages, it is also likely that along the entire length of this bight a loading quay may have existed, obscured today beneath a modern dirt road. Such a facility would have served the numerous *horrea,* or storage magazines, that exist beneath the anthropogenic mounds in this section of the ancient city (Bull 1982). The presence of these warehouses in fact strengthens the assumption that the south bay was a secondary anchorage for the more than six centuries these buildings were in use. While commodities could easily have been moved by cart to the main inner-outer harbor complex of Sebastos, it would seem more probable that whenever sea conditions permitted, ships would have docked alongside the *horrea* to facilitate their loading and unloading. Moreover, miscellaneous pottery sherds and several stone anchors, one of which dates from about 1200 B.C., uncovered in the bay during the 1981 season and in previous years, suggest that the use of the south bay as an anchorage extends back in time well before Herod's new city was built.

Piscina *(fish tank) complex at the southern limit of the south bay. Photograph is by Robert L. Hohlfelder.*

There also appears to have been another harbor to the north of the main facility of Sebastos, immediately adjacent to the synagogue and Hellenistic occupational levels excavated by Michael Avi-Yonah (1956, 1961) and west of the twin circular towers uncovered by Antonio Frova (1965). At this point along the Caesarea coastline, CAHEP investigators discovered a section of a Phoenician or Hellenistic quay that is about 4 meters wide and has a visible length today of approximately 30 meters; it is surmounted by finely cut ashlar blocks linked together in antiquity by lead dovetail clamps. This type of block, with clamps as fasteners, is characteristic of Herodian construction elsewhere at Caesarea and suggests that the earlier quay was renovated when the main harbor was constructed and apparently served some commercial function. A small land probe was made adjacent to the quay in 1981. It produced numerous pieces of Hellenistic pottery dating back to the second and third centuries B.C. At this time, the configuration of the harbor is not known, and its history cannot be reconstructed. It will be



Plan of building stones found at the seaward end of the north breakwater. These blocks may have been part of a lighthouse.

The artifacts found to date, such as coins, fishing weights, and lamps, represent the litter found in any ancient harbor; they were moved throughout the entire area of Sebastos by currents and storms until they were finally buried on the ocean floor or wedged into the rocks of one of the breakwaters.

the site of extensive investigations in future seasons. It does seem likely, however, that it too may have been one of the secondary anchorages referred to by Josephus.

The Artifacts from the Underwater Excavations

To date, the ceramic finds and the other artifacts, such as coins, fishing weights, lamps, and statuettes, discovered during the course of CAHEP's investigations have come from unstratified contexts. These objects represent the litter to be found in any ancient harbor; they were moved throughout the entire area of Sebastos by currents and storms until they were finally buried on the ocean floor or wedged into the rocks of one of the breakwaters. While providing some information about the life of Sebastos, this material is less significant than it would be had it been recovered in more controlled excavations from trenches with stratigraphic integrity. At this point in the preliminary study of these random finds it seems appropriate only to note that the overwhelming majority of all artifacts discovered in the inner-harbor complex and elsewhere in CAHEP's explorations dates from the Late Roman-Early Byzantine era of Caesarea's history. Whatever the fate of Sebastos through neglect or natural calamities, it continued to serve the needs of Christian Caesarea from the fourth through the mid-seventh centuries. In particular, the main outer harbor complex of Sebastos appears to have been the major port of Byzantine Caesarea, enjoying a volume of activity and traffic that may have been worthy of Herod's original idea of his city and its harbor.

Conclusions

Herod's Sebastos appears to have been a facility as extraordinary as Josephus would have us believe. It featured a maritime engineering technology as sophisticated as that of our own age. The design and execution of the south breakwater is thoroughly "modern." In the construction of Sebastos the first extensive use of hydraulic concrete in the eastern Mediterranean appears to have occurred. The architectural concept of connected inner and outer basins may have provided the model followed in the construction of imperial Rome's harbor at Ostia, built by the emperors Claudius and Trajan. When its secondary anchorages are included, Sebastos was the largest harbor in size in the Levant at the time of its completion, one of the largest in all the Mediterranean, and certainly the most advanced in its design and construction. Josephus was quite correct to compare it in size to Piraeus, the harbor of ancient Athens, and to have praised Sebastos as the most significant feature of Caesarea Maritima. It was a twentieth-century harbor constructed 2,000 years ago.

Acknowledgments

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Headers in the foreground mark the Phoenician or Hellenistic quay in the secondary anchorage north of the main facility at Sebastos. The massive rubble structure seaward is part of the Byzantine fortification system probably constructed around A.D. 500. Photograph is by Robert L. Hohlfelder.

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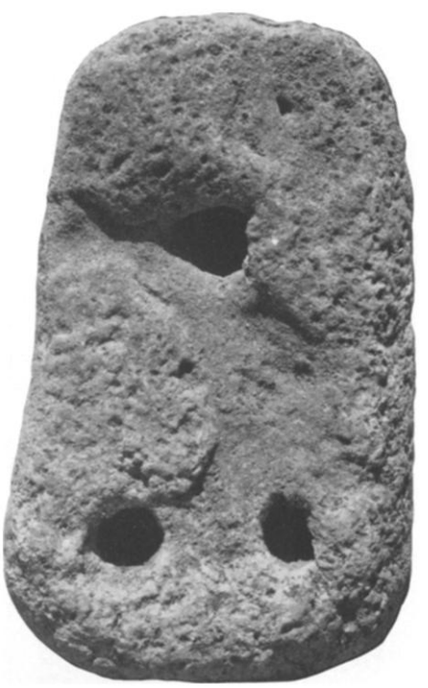

Stone anchor for a small craft of about 1200 B.C. found in the south bay. Ancient mariners apparently called at the future site of Caesarea Maritima long before the city came into existence. Photograph is by Robert L. Hohlfelder.