

The harbours of Phaselis

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Introduction

On the west side of the Pamphylian plain on the south coast of Turkey the Taurus Mountains swing southwards, enclosing the Gulf of Pamphylia from the west with a steep and mostly inhospitable coast. This coast, which ends at Cape Gelidonya to the south, offered few harbours to the ships sailing along one of the main trade routes of antiquity, from Cyprus, Cilicia and the Levant to Rhodes, and then to Cnidus and the Aegean or to Crete and the west. The only good harbour on this coast is at Phaselis, where a projecting peninsula creates a natural 'double harbour', further protected by a headland to the north.

Land communications on this coast, and over the mountains to Lycia proper to the west, are poor now and were probably much the same in antiquity. The planned motor road around the entire south coast of Turkey has not yet reached Phaselis, so that the site is still naturally protected from depredation. The easiest approach is now, and must always have been, by sea.

History

According to tradition, Phaselis was founded as a Rhodian colony in 690 BC. The city clearly shared in the increasing prosperity of Greek trading cities in the 7th and 6th centuries; it was forced to rely on trade for its survival, since it possessed little cultivable land, but rich supplies of timber for ship-building and for export and a commercially strategic position. The ship on its coins symbolizes the source of its prosperity. Under Persian rule in the later 6th century, it was forced into the Athenian league in the 5th century and paid a large amount of tribute,

an index of its prosperity. Phaselite merchants were later notorious for their cunning as businessmen. Until the foundation of Attaleia in the mid-2nd century BC Phaselis was by far the most important port in the Pamphylian Gulf.

Under Persian rule again in the 4th century, the city was freed by Alexander, who spent some time there early in 333. From 309 to 197 it was under the rule of the Ptolemies, kings of Egypt, and from 190 to 169 under Rhodian rule. Then freed by Rome, the city joined the Lycian league. In the early 1st century BC the city was controlled for a time by the 'Cilician' pirates, and suffered for this after its capture by the Roman general Servilius. It appears to have then had a long period of decline, but this had ended by the 2nd century AD, when the Roman emperors did much for the coastal cities of southern Asia Minor.

The great period of prosperity ended by the late 3rd century, as a result of barbarian invasions and the depredations of brigands on land, and a renewed threat to maritime trade from piracy. Despite this, and the later Arab sea raids, the city survived and, though never again enjoying complete security, it probably recovered some prosperity under the protection of the fleet of the Cibyrhaeot theme from the 8th century onwards. However, the battle of Manzikert (1071) laid Asia Minor open to penetration by the Selçuk Turks, and though the Byzantines clung to some of the coastal cities, Phaselis was finally conquered in 1158, and disappeared from the historical record.

Earlier studies

The first traveller of modern times to study the site seriously was Capt. Beaufort, who

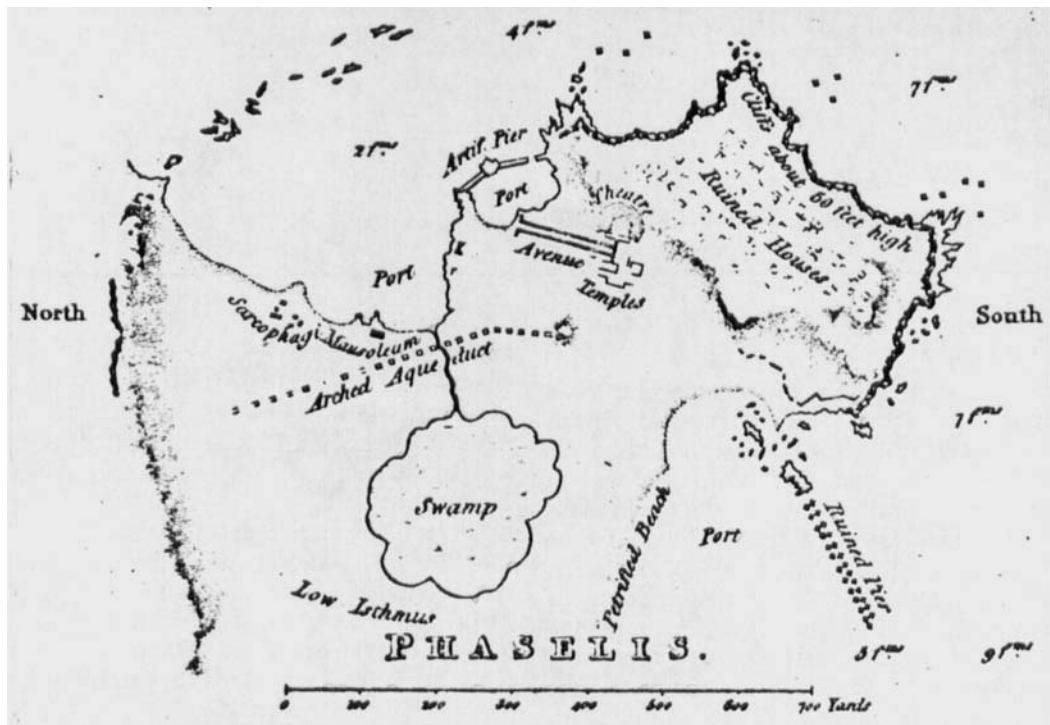


Figure 1. Beaufort's plan of Phaselis (1818: 56).

surveyed the coast of Karamania for the Royal Navy in 1811–12. His plan of the city (1818: 56, Fig. 1) and his survey of the surrounding area is the basis for all later naval charts (indeed, his book *Karamania* contains much archaeological information

of great importance, about many sites besides Phaselis). Similarly, his verbal description of the site is the basis of many later descriptions. A number of other scholars have visited the site, but only for brief periods, and their descriptions, though often



Figures 2 and 3. 2. The city peninsula and marsh from the north. 3. The acropolis, from the south; to the left, the South Harbour.



Figure 4. Schematic plan of Phaselis. A, North Harbour; B, Central Harbour; C, South Harbour; D, Quad-rangular Agora; E, Domitianic Agora; F, later agora; G, main street; H, Hadrian's Gate; J, theatre; K₁₋₆, city wall; L₁₋₂, aqueduct; M, spring; N, marsh; O, ascent to outer fort; P, wall of outer fort; Q₁, temple; R, remains of houses; S, necropoleis; T, ancient road, Olympos-Phaselis-Attaleia; U, modern road, Tekirova-Kemer; U₁, modern approach road to the site.

useful (especially Stark, 1956: 172-6; Bean, 1968: 151-64) are not comprehensive, and apart from Bean's sketch plan no plans of the site have been published^[1]. The land site is an extremely difficult one to take in on a short visit, for it is now heavily wooded and overgrown (Fig. 2). But considerable remains of buildings survive, clearly worth detailed study. Furthermore, the remains of the ancient harbours, though obviously of great interest, and noted by Beaufort and other visitors and briefly mentioned by Lehmann-

Hartleben (1923: 276), had not been investigated in detail.

The site therefore called for more lengthy and intensive study, especially in view of the threat to its seclusion from the approaching tourist road. In 1968, Helmut Schläger of the German Archaeological Institute obtained a permit to survey all visible remains at the site, above and below the water surface, and completed the main lines of the land and under-water survey. In 1969 he and his assistant, Udo Graf, were drowned in a tragic diving

accident. In the autumn of 1970 the survey was completed for the German Archaeological Institute by Jörg Schäfer, Paul Knoblauch and the writer. No excavation was carried out. This preliminary report is confined to one part of the work: the survey of the ancient harbours^[2].

Topography of the city

The city lies on a narrow peninsula which projects some 600 m seawards and ends in cliffs over 30 m high on the south-east side (Figs 2 and 3; plan, Fig. 4). Here lay the ancient acropolis. North-west of the acropolis the neck of land is only 250 m wide at its narrowest point; here the main street axis (G) ran across the city, passing the main agoras (D, E, and later also F) and linking the two main harbours (B, C). To the west a narrow neck of land, only 150 m wide and deep in dune sand, links the city to the mainland; it is bounded on the south by the great South Harbour (C) and on the north by a marsh (N) which is a lake in the winter and nearly dries out in the summer (Fig. 5). The geographer Strabo (xiv: 666) mentions that Phaselis has three harbours and a *limne* or marshy lake. The three harbours are clearly defined: the large bay south-west of the peninsula (the 'South Harbour': C); the small enclosed harbour just north of the acropolis (the 'Central Harbour': B); and the bay north of the Central Harbour, protected by a line of rocks on its north-east side (the 'North Harbour': A). The marsh drains into the North Harbour; across the shore between

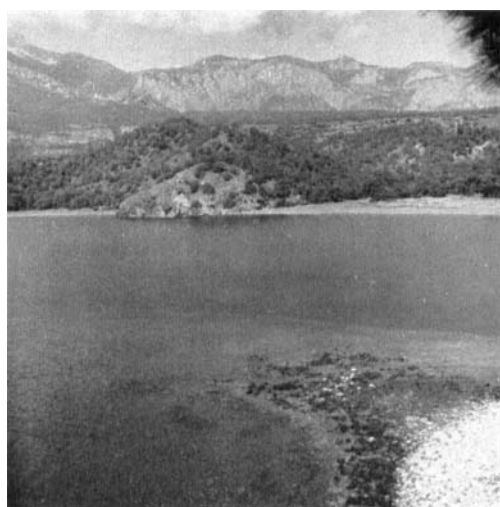
them run the remains of a line of piers which once supported an aqueduct (L), bringing water into the city from a spring high on the hillside to the north (M), within an outer fortification. Beyond the North Harbour and marsh to the north and north-west lay the necropoleis of the city (S), and traces of the ancient approach road (T).

South Harbour

The South Harbour of the city lay in the eastern part of the great bay south-west of the peninsula, relatively well sheltered by high ground to the north and east (Fig. 6). It was protected from the south-east wind by a man-made bank of stone blocks and rubble, now almost entirely under water, which continues a tongue of land westwards for approximately 100 m (Figs 7 and 8). Beaufort (1818: 59–60) says 200 yards, but he must be including the tongue of land, the flat part of which is about 50 m long. At its outer end this breakwater is submerged by 5–6 m and stands in 10–12 m of water. It seems to have subsided like the breakwater at Cosa (Lewis, 1973: 241–2). There are traces of a pier built of ashlar blocks on the breakwater near its base, and now badly eroded (Fig. 9). Other traces of harbour installations in the South Harbour are too fragmentary to interpret, except for a jetty, probably relatively modern,



Figures 5 and 6. 5. The South Harbour and marsh, from the north. 6. The South Harbour, from the south.



Figures 7 and 8. 7. The breakwater in the South Harbour, from the east. 8. The South Harbour breakwater: north-west slope, looking north-east.



Figure 9. The South Harbour breakwater: remains of a pier.

in which two ancient statue bases were re-used (Kalinka, 1944: nos. 1206–7). The ancient city wall ran round the shore of the bay (K_5).

Neither the bank nor the pier can be precisely dated, but this harbour was probably the first to be developed, so that an early date in the city's history is not excluded. A 'coastal pilot' published in the later 4th century BC, but possibly containing older material, refers to the 'city and harbour' of

Phaselis ([Scylax] 100); this indicates that the city had originally only one proper harbour, with quays and basic facilities. The one harbour referred to is unlikely to have been the North Harbour; as is explained below, it was the least attractive of the three for mariners. Of the other two harbours the South Harbour seems the likelier candidate, since [Scylax] continues 'and this is a bay'.

When the emperor Hadrian visited the city, probably in 131, he almost certainly landed in the South Harbour, for it was at the south end of the main street, just inland from the South Harbour, that a monumental gate was erected to commemorate his visit (this is shown by the inscription: Kalinka, 1944: no. 1187, plus new fragments).

Central Harbour

The Central Harbour lies in a small bay, naturally protected by the acropolis to the south and by the buildings of the city to the west (Fig. 10). On its north side a low ridge of rock projects south-eastwards (Fig. 11); along the outer, north edge of this ridge was laid the city wall (K_3 – K_2), which then ran south along the mole which protected the harbour from the east and narrowed its entrance to 18·10 m; there was a corresponding but shorter mole on the south side of the entrance, which also bore the city



Figures 10 and 11. 10. The city peninsula from the north-east. In the foreground, the North Harbour; beyond, at the foot of the acropolis, the enclosed Central Harbour. In the distance, the rugged east coast of Lycia, running southward to Cape Gelidonya. 11. The Central Harbour from the south; in the background, the North Harbour.

wall (K_1) (Fig. 12). The wall is of large regular blocks laid in mortar. The wall survives to the top of the socle on the north mole, and is awash except at low tide; the wall on the south mole survives one course higher (c. 0.45–0.60 m). The foundations of the wall are at depths of up to 1.50 m. On either side of the harbour entrance the wall ends in a small bastion (Figs 13 and 14). The harbour thus qualified as a *limen kleistos*, whether this meant an ‘enclosed harbour’, that is, one enclosed within the city wall (as Lehmann-Hartleben believed), or, as seems more likely, a ‘closable harbour’, that is, one whose entrance could be closed by means of a chain or boom.

The harbour basin is now heavily silted up, and its western edge now lies under a shingle bank; only the entrance is still free of silt, with a maximum present water depth of 2.90 m. The most interesting feature of the harbour is the quay on its south-western side (Figs 15 and 16). It terminated on the west at the north end of the main street of the city; its exact length is not known, for it is broken away at the eastern end. It had an ashlar facing and a rubble and mortar fill. Its upper surface will have been about 4 m above water level in antiquity. Ships made fast not to vertical bollards set in the surface of the quay, nor to pierced stones projecting from the

face of the quay, but to bollards projecting horizontally from the face of the quay (one is well preserved: Fig. 17); this curious arrangement appears to be quite unparalleled. The bollards are spaced at intervals of between 3 and 6 m.

The quay lay close to the main street, and thus was conveniently placed for loading or unloading wares from or for the shops or

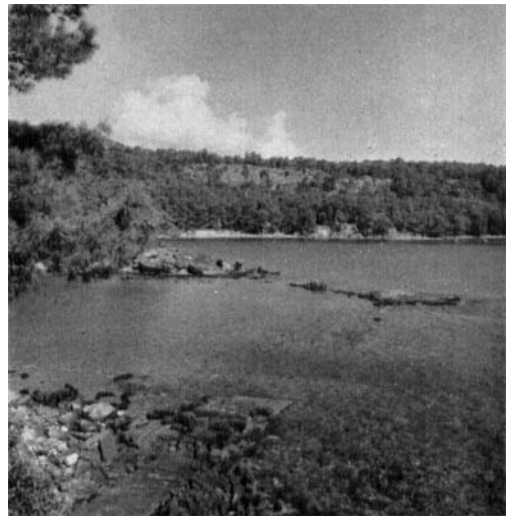


Figure 12. The Central Harbour entrance, at high tide. The north mole and bastion are just awash.



Figures 13 and 14. 13. The head of the south mole, Central Harbour: underwater view at high tide. 14. The head of the south mole, Central Harbour: view at low tide, from the west.



Figures 15 and 16. 15. The quay in the Central Harbour, from the north. To the right, the north end of the main street. 16. The quay in the Central Harbour, at high tide.

workshops which lined the north part of the street; but the harbour as a whole was very limited in size. The date when this harbour was given its surviving form is not certain, but it is likely to have been the late 1st or early 2nd century AD; this is the period when the main street (G) and agoras (D and E) were laid out, and probably (in view of their technique of construction) the period when the city walls were constructed. A

number of buildings just west of this harbour seem to have continued to be occupied at a very late date, and the harbour may have still been in use then.

North Harbour

North-east of the Central Harbour lies the North Harbour (Figs 10 to 12), an open bay protected from the north-west by high ground and from the north-east by a natural barrier



Figure 17. The best-preserved bollard.

improved by man: just offshore is a group of rocks, and almost 300 m offshore is a reef, now roughly at sea level; a straight breakwater, 4 m wide, 235 m long and probably built on a natural line of rocks, runs between them (Fig. 18). The breakwater was faced on either side by a single line of blocks of stone, now surviving only one course high (Fig. 19); between the two lines there are no traces of worked masonry, but in one place bedrock is visible and appears to have been levelled.

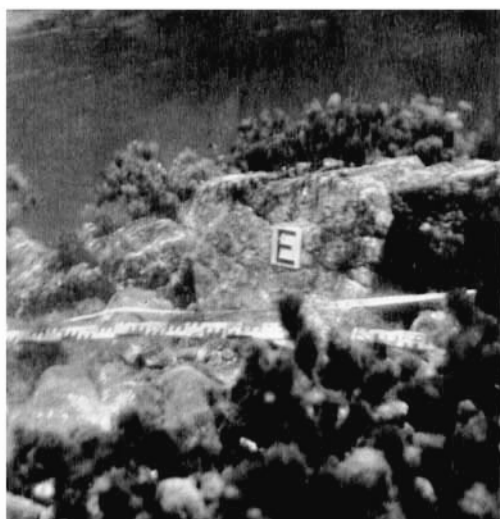


The upper surface of the breakwater is now 1 m below mean sea level, and 0.60 m below high water; this indicates the minimum relative rise in sea level since antiquity. The rise is unlikely to have been much more than 1 m; indeed, the intention may have been to allow waves just to wash over the breakwater^[3]. The breakwater is very difficult to date; it could be Hellenistic, or even earlier.

Along the north-west shore of this harbour there are no remains of structures such as quays, but only tombs. There are also no traces of a quay on the south-west shore, at the outer foot of the city wall (K₃). One gets the clear impression that this harbour was nothing more than a roadstead and, what is more, one not well sheltered from the west and completely exposed to the south-east wind. The bay was completely outside the main fortifications of the city and not even lined by them (as the South Harbour was) except at the south-west side. Furthermore, study of the underwater contours of the North Harbour (see Fig. 20) shows that with sea level only 1 m lower there would have been extremely inconvenient rocky shallows in the bay.

Conclusion

In conclusion, the following pattern of use



Figures 18 and 19. 18. The North Harbour breakwater, from the shore. 19. The North Harbour breakwater: south facing-wall.

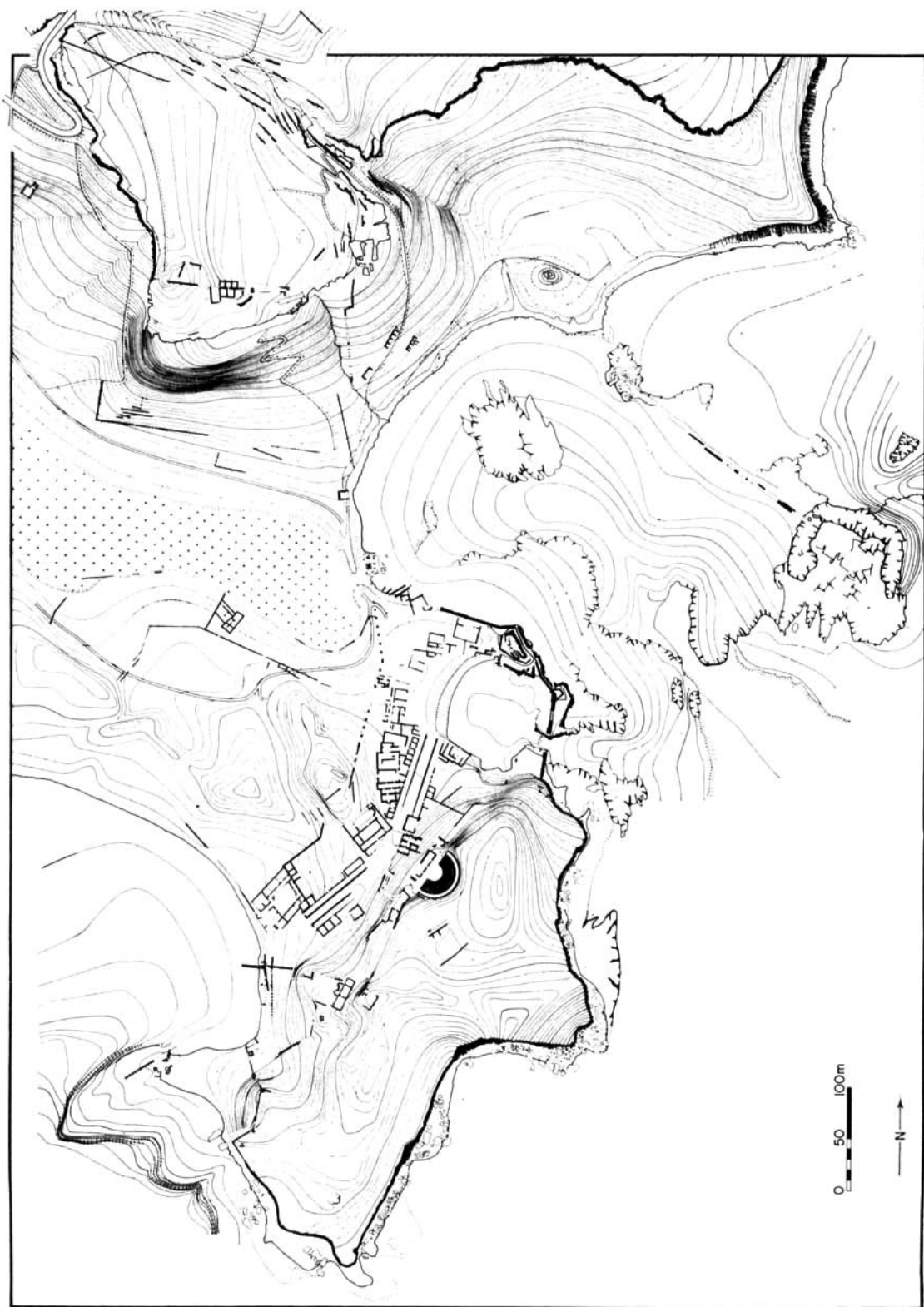


Figure 20. Contour plan of the site (1 m contours, above and below the surface).

for the three harbours may be suggested: in early times the South Harbour was the main harbour, and the earliest to have man-made harbour installations; the other two harbours were almost certainly already used, but there is in them no certain evidence of harbour installations of early date (though the breakwater in the North Harbour could be early). By the 1st century BC, when Strabo wrote, all three harbours could be properly so described. Probably in the late 1st or 2nd century AD the Central Harbour received its surviving installations; this is certainly the latest date for the harbour works in the North and South Harbours, which may be much earlier. The Central Harbour may well

have continued to be used until the fall of the city; its defensibility would have been an important attraction, though it is possible that in late antiquity the fortification wall embraced the acropolis alone.

Acknowledgements

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Notes

- [1] For a publication of all the then known inscriptions from the site, with a good historical introduction, see Kalinka, 1944: 413–26; for a general survey of the city's history and institutions, see Ruge, 1938; Robert (1966: 40–4) adds some useful comments on the city's topography and trade.
- [2] A preliminary report on the entire survey has now appeared: Schäfer, 1971 (published 1972). The final report, it is planned, will appear in *Istanbuler Mitteilungen*.
- [3] Compare the Roman breakwater at Cosa, on the Etruscan coast (Lewis, 1973: 238). For a valuable recent discussion of the evidence for relative sea level change in historic times in the south Aegean and south-west Turkey see Flemming & others (1973), who believe that the element of eustatic rise is very small; on the value of ancient harbours in providing such evidence see also Blackman, 1973.