

[Berlin 1933] 318 n. 3) of the astronomical text VAT 4924, dated in the fifth year of Umasu (i.e., Ochos) must be corrected: the text has subsequently been published, and its astronomical contents date it firmly to the reign of Darius II Ochos, 419/18 BC. It should also be observed that Unger's translation of the final line as 'angesichts des Aufstandes' and the reading on which it was based (*ana pân zi-ḥi*) were erroneous. As Hermann Hunger tells me, the passage in question is a brief colophon that identifies the contents of the text as

*ana amāri* (IGI) *nashī* (ZI-ḥi)  
 excerpted for study

without reference to any revolt (Babylonian *sīḥu*) or other political circumstances.

*A Missing Text from the End of  
 the Reign of Artaxerxes II*

The text accessioned by the Babylonian Section of the University Museum, Philadelphia as Kh<sup>2</sup> 420 (now numbered CBS 1420) was published by Barton, *American Journal of Semitic Languages* xvi (1899–1900) 67 no. 2. Barton (p. 65 n. 2) attributed it to the reign of Cambyses. A summary catalogue of the holdings of the Babylonian Section by Hilprecht and others attributes it (with a query) to the reign of Darius I. A collation of lines 4 f. establishes clearly that the text comes from the end of the reign of Artaxerxes II:

(4) . . . *ina* ITI.GUD MU.45.[KAM] (5) <sup>m</sup>*Ar-tah-ṣat-su*  
 LUGAL

(a debtor is to make a repayment at Babylon) in Ajaru (month II), year 45 of King Artaxerxes (II).

Oelsner, *Die Welt des Orients* viii (1976) 315 n. 18 cites a reference in a manuscript of Hilprecht to Kh<sup>2</sup> 541, an unpublished tablet in Philadelphia dated in the forty-fifth regnal year of Artaxerxes II. The summary catalogue by Hilprecht and others, however, identifies CBS 1541 (=Kh<sup>2</sup> 541) as a fragment of an Old Babylonian tablet, and a note in the appropriate cabinet in the Babylonian Section indicates that this tablet has been 'missing since 1909', shortly before the notorious 'Hilprecht-Peters controversy', when the ownership and whereabouts of some of the Philadelphia tablets came into question.

It is apparent that the Hilprecht catalogue's entry for CBS 1541 refers to a different tablet from the one that the Hilprecht manuscript refers to as Kh<sup>2</sup> 541, and it is therefore probable that Hilprecht's manuscript refers by an erroneous number to the text already published but erroneously dated by Barton.

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**The Harbor at Pylos, 425 BC\***

Thucydides' full description of the harbor at Pylos is

\* I am grateful to Drs Boeghold and Ackerman and to my son Matthew for their help with this note.

part of his discussion of the Spartan strategy for the campaign (iv 8).<sup>1</sup>

. . . and the Lacedaimonians . . . expected the Attic fleet from Zacynthos to come to the rescue and intended, if they had not captured Pylos by that time, to block up the entrances to the harbor, so that the Athenians could not sail in and use it as an anchorage. (The island called Sphacteria extends alongside the harbor, and lies close to it: hence the anchorage is safe and the entrances narrow—the entrance by Pylos and the Athenian fortifications giving a passage for two ships through the channel, and the entrance by the mainland on the other side a passage for eight or nine . . .) These entrances then, they intended to block up tightly with ships lying parallel to each other, prows to the enemy: and since they were frightened that the Athenians might use Sphacteria as a military base, they ferried hoplites across to it, and stationed others along the mainland. By this plan, they thought, the Athenians would find both the island to be enemy-occupied and the mainland, which gave them no chance of landing (for the coast of Pylos itself, outside the entrance and towards the open sea, is harborless, and would give them no base of operations to help their troops): and equally they themselves would probably be able to capture the place by siege, without a sea-battle or any unnecessary danger—there was no food in it, and it had not been properly prepared for a siege. This, then, was their agreed plan . . .

Although one would think this a clear and detailed geographic description, historians have not yet found a location at Pylos for the harbor which satisfactorily matches it. Except for Grundy (whose lagoon harbor was discredited by Pritchett),<sup>2</sup> all historians have identified Thucydides' harbor as the entire Navarino Bay (Figure 1), despite the following and long recognized difficulties: (1) the south entrance to the bay is too wide and deep to be blocked by triremes, particularly by a Peloponnesian fleet which consisted of fewer than 60 of them (8.2, 13.1), and it is far too wide to be described as allowing passage for only 8 or 9 of them (8.6); (2) the entrances to the bay do not fit the 4:1 width ratio enumerated in 8.6, and (3) the bay is too large to be considered a classical harbor or for its waters to be called sheltered. Furthermore, the Spartan strategy for blocking the entrances to the harbor, which so sensibly fits the limited capabilities of the Peloponnesian fleet, and which Thucydides mentions three times (8.5, 8.7, 13.4), cannot be implemented in the way he describes if the bay with its southern entrance is the harbor he means. This discrepancy renders other parts of the text difficult to interpret or comprehend. The naval battle of chapters 13–14, which he says takes place in the harbor, and which will be reassessed at the end of this Note, is particularly obscure in the absence of a clear and plausible idea of where and under what circumstances it occurred. Heretofore, scholars have either ignored these problems or explained them as products of Thucydidean errors.

A preferable location for Thucydides' harbor at Pylos has been overlooked. It is not without difficulties, but it

<sup>1</sup> All Thucydidean references are from book iv unless otherwise noted, and all translations from Thucydides are from J. B. Wilson, *Pylos 425 BC, a historical and topographical study of Thucydides' account of the campaign* (Warminster, Wilts. 1979).

<sup>2</sup> G. B. Grundy, *JHS* xvi (1896) 1–51. W. K. Pritchett, *Studies in ancient Greek topography i* (Berkeley 1965) 6–29. Pritchett's evaluation, that in 425 the sandbar was in existence and the lagoon could not have been a harbor, was also corroborated by William G. Loy and H. E. Wright, Jr., 'The Physical Setting', William A. McDonald and George R. Rapp, Jr. (edd.), *The Minnesota Messenia expedition* (Minneapolis 1972) 46.

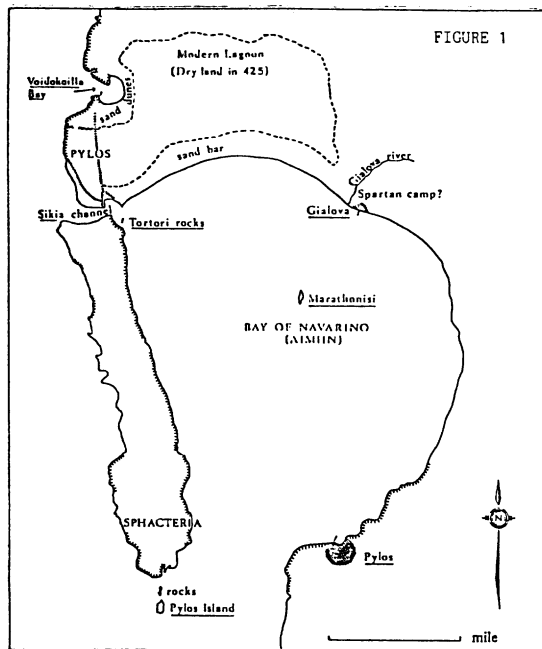


FIG. 1. The Bay of Navarino. Printed with the kind permission of J. B. Wilson and Aris & Phillips Ltd.

conforms more closely to the text and does not require Thucydides to have made major errors. It is the cove marked 'A' on Figure 2, off the southeast corner of Pylos, at the eastern end of the Sikia channel. Its narrow entrance is the channel between the Tortori Rocks and the sandbar shoal, its wide one the throat of the Sikia channel. I first saw that the cove could be the harbor when comparing a map of Pylos with an aerial photograph of the same area.<sup>3</sup> The photograph shows that the true position of Sphacteria's northwest cape protects the cove harbor from the west, which is not indicated on the map (or on any other maps of Pylos I have seen), and that the cove is actually larger and more pronounced than it appears on maps. A personal visit to the site in June, 1985 confirmed the plausibility of the cove harbor hypothesis.

The most serious argument against the cove harbor arises from Thucydides' statement in 8.6 that the entrance by Pylos and the Athenian fortifications is smaller (allowing passage for two triremes) than the entrance by the mainland (eight or nine). This orientation is the opposite of that found for the entrances to the cove harbor: there the smaller Tortori channel is on the east or mainland side, and the larger Sikia one is to the west by Pylos. For the bay, however, the statement's orientation is correct. If the cove is the true harbor, then Thucydides or a scribe must have reversed the actual relationship between its entrances.

However, there is another descriptive passage from 8.6 which fits the cove precisely. 'The island called Sphacteria extends alongside this harbor and lies close to it: hence the anchorage is safe and the entrances narrow.' Sphacteria actually does shelter the cove harbor from both the south and west and lies close to it (in fact the only shore to which the island may be said to lie close is

that of Pylos where the cove is), and the island's shoreline forms the southern limit of both entrances and could properly be said to render them narrow. When applied to the bay, this statement is awkward at best. Can an island whose shore forms a boundary of a harbor also be said to 'lie close' to that harbor? Moreover, given the size of the bay, it is difficult to see how Sphacteria renders the bay's anchorage safe or its southern entrance narrow.

One apparent difficulty stems from Thucydides' description of the harbor as 'not small' in 14.1 (*toi limeni onti ou smikroi*), since to modern eyes the cove seems very small indeed. This subjective perception, perhaps reinforced by inaccurate maps, may largely explain why scholars have rejected or overlooked the cove as a harbor location. In the absence of alternative sites, they have interpreted the *ou smikroi* phrase as a litotic description of the bay. Some have wondered, however, why Thucydides never explicitly mentioned the bay's most striking characteristic—its size; for as a harbor, the bay is not just large, it is immense. Fully three times the size of the Great Harbor at Syracuse, it is, as Gomme notes, 'much the largest (harbor) in Greek waters, including south Italy and Sicily.'<sup>4</sup>

To Gomme and others, this remarkable descriptive lacuna supported the thesis that Thucydides had never visited Pylos himself and did not know that the bay was so vast. On the other hand, chapters 31–8 describe the Sphacteria fighting with such vivid immediacy and accurate geographic detail that one could argue from them that the author had indeed been there and knew the place well. Grundy responded to this dichotomy by speculating that Thucydides must have had at least two different informants—one who misinformed and confused him about the harbor(s), and another who accurately and intimately told him of the fighting on Sphacteria.<sup>5</sup>

These apparent complexities would vanish if the *ou smikroi* passage were accepted as a literal and accurate reference to the cove. After all, the protected area is large enough (roughly circular in shape with a diameter in excess of 150 yards) to shelter at least 15 triremes at anchor (perhaps double that number if they were rafted together), and its entire north shore is long enough to permit the beaching of 15 to 20 more. The cove as a base for 30–50 triremes—despite its appearance to us—would certainly be 'not small' by classical naval standards.

Also in 8.6, Thucydides describes the harbor's entrance channels as wide enough to permit the passage of two triremes in one case, and eight or nine in the other. In absolute terms, this description could match the cove harbor entrances very well. Wilson measured the Tortori channel as 35 yards and the Sikia at its throat as 110 yards wide. If we divide these distances by his 15 yards passage-width per trireme,<sup>6</sup> we produce a ratio of 2:7. This is a remarkably close fit to the 2:8–9 of the text, especially since Thucydides' unit of measure was not precise and his distance estimates were approximate.

Of course, we cannot know what the cove harbor entrance dimensions were in Thucydides' time. Wilson's measurement of the Tortori channel width is

<sup>4</sup> A. W. Gomme, *HCT* iii (Oxford 1956) 482–3.

<sup>5</sup> Grundy (n. 2) 42 ff.

<sup>6</sup> Wilson (n. 1) 74–7, n. 5 and n. 10.

<sup>3</sup> Wilson (n. 1). See 144–5 for the map and aerial photograph.

necessarily arbitrary because the sea bottom here is a sand bar which slopes gently from the shoal to the Tortori Rocks. Its lowest section is only one meter deep today, shallower than it must have been in 425 BC when it permitted the passage of triremes and effectively marooned the Spartan garrison on the island. Except for Pritchett's demonstration of a rise in sea level, we know little about the changes that may have occurred in the local hydrography since antiquity. Perhaps all we can say is that a deeper Tortori channel some 30–40 yards wide is a plausible antecedent of today's conditions.

Fortunately, the argument for the cove harbor does not rely upon the close fit between Wilson's measurements and the description of iv 8. By demonstrating the possibility that appropriate distances for Thucydides' channels could have existed at the cove harbor entrances, which Wilson's measurements have done, one can infer that the cove and not the bay is the harbor, because the bay's 1400 yards-wide southern entrance is not a viable alternative; for any estimate of Thucydides' distances, it is totally out of scale. The same logic applies to Thucydides' 1:4 relationship between the channel widths. Such a ratio is possible for ancient channels at the cove harbor entrances but out of the question for either of these channels with the bay's southern entrance with which, following Wilson's measurements, they form ratios today of 1:40 and 1:13 respectively.

Thucydides also mentions the harbor in other narrative contexts. In 31.1, he writes that the Athenians landed on both the 'harbor side' and the 'seaward side' of Sphacteria. This fits the bay nicely, but it would also be true of the cove if the island were viewed from the north, i.e. from Pylos, because from that perspective, the cove harbor definitely seems to lie toward the east or bay side of Sphacteria.

In 26.8, he writes about food being dragged to the island by divers swimming underwater at, in, or from the harbor. It stands to reason that they would wish to do this at the narrowest channel between island and mainland in order to reduce fatigue and to avoid detection. The necessity to surface for air on longer routes would work against the desire to remain concealed, which is implicit in the statement that they swam underwater. Since the narrowest passage by far (with a beach, not rocks, at both ends) is from the sand bank by the cove harbor across the Tortori channel to the northeast tip of the island, Thucydides' description of this activity as taking place at the harbor supports the cove rather than the bay.

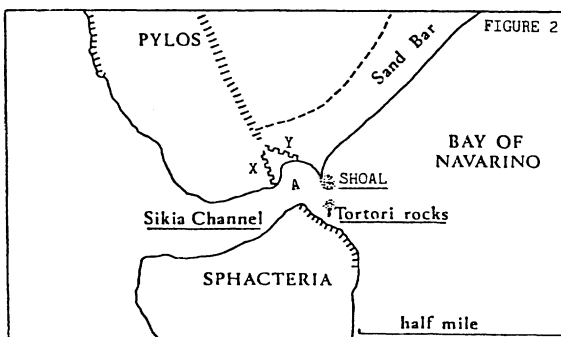


FIG. 2. The cove harbor area. Printed with the kind permission of J. B. Wilson and Aris & Phillips Ltd.

In 13.1, he states that one of the Athenian walls is 'facing', 'opposite', or at least 'in the vicinity' of the harbor. Both of the walls marked 'X' and 'Y' on Figure 2, whose location was so nicely deduced by Wilson,<sup>7</sup> would fit that description if the cove were the harbor, but it would apply to the bay only in the somewhat strained sense that the cove is an extension of the bay.

The north shore of the cove is a gentle beach. Wilson showed that it was partially enclosed within the Athenian walls,<sup>8</sup> that it was the only beach that could have been so enclosed, and that it was the only location where Demosthenes could have dragged up his three triremes and driven in stakes for a palisade (9.1).<sup>9</sup> However, neither he nor anyone else seems to have noticed that the beach itself could be an essential strategic element of Thucydides' harbor, and hence an important clue to its location.

For ancient mariners, a harbor was (1) a protected body of water where ships could find safety from bad weather, (2) a port where goods could be easily transferred between ship and shore, and (3) a place where crewmen could go ashore to enjoy a respite from shipboard life. The Pylos cove has protected water, although perhaps not enough to accommodate the large Athenian fleet which ultimately assembled there.<sup>10</sup> It is certainly an excellent site for landing supplies, although that could have been carried out, albeit with difficulty and only in calm weather, at other places on the Pylos coast.<sup>11</sup> As a ship base or landing, however, the cove beach was a unique and strategically vital resource for the Athenians.

Here was the only spot where their triremes could be beached so that the crews could rest ashore. Elsewhere the coast of Pylos is too rocky or steep to moor ships, and all other landing places in the region, pursuant to the Spartan strategy (8.7), were occupied by enemy troops. Today, when modern ships are so comfortable that shore leave has become almost trivial, we may underestimate the importance of this function of harbors, but in classical naval warfare it was absolutely vital. The crowded trireme lacked facilities for preparing meals or for sleeping; without regular visits ashore for food and rest, the crew's health, morale, and battle performance would deteriorate rapidly. Normally, a trireme would seek out a friendly port for this purpose, but if that were unavailable, it could put into a neutral or at least unoccupied beach. Such military 'harbors', therefore, were often no more than cove beaches like the one at Pylos, but they were so essential to maintaining combat capability that the Spartans could effectively plan to force the Athenian fleet to withdraw entirely from the Pylos region by denying it access to all local landing sites.

No one knows exactly where Demosthenes placed the wall 'Y' on the shore or how much beach it enclosed. He must originally have wished to minimize the amount of wall that had to be constructed and defended, so he probably enclosed only enough beach to

<sup>7</sup> *Ibid.* 54–60.

<sup>8</sup> *Ibid.* 59.

<sup>9</sup> *Ibid.* 57–8.

<sup>10</sup> More sheltered waters existed nearby. For most winds, the Sikia channel and the waters off the north shore of the bay were good anchorage.

<sup>11</sup> Wilson (n. 1) 80.

moor a small garrison squadron of triremes. This enclosed beach later proved unable to support the large fleet that stayed on at Pylos to blockade Sphacteria, but he could not have foreseen that requirement when the walls were built. Because it was inadequate, the Athenian crews were forced to spend many uncomfortable hours on shipboard at anchor, to take meals in relays (26.3), and even to prepare and serve meals behind posted guards on some of the few tiny beaches of Sphacteria (30.2).

Access (and denial of access) to the cove harbor beach was thus crucial to the strategy of both sides. Demosthenes must have been thinking more of the beach than of the cove's protected water when he said to the generals that Pylos was different from the other barren promontories because it 'had a harbor' (3.3). He can only have meant that it had a harbor (beach) that could be fortified and used as a base by friendly naval units in the event of a land siege. Without such a facility, the Athenians could never have hoped to hold Pylos and would hardly have expended the effort required to fortify it. It is difficult to understand how his observation could have referred to the entire bay.

Conversely, the blocking strategy at the cove harbor must have seemed particularly effective to the Spartans, as thereby the Peloponnesian ships could deny the Athenian fleet the use of the sole landing beach in the area which could not be occupied by Spartan troops. The Spartan occupation of Sphacteria, which some scholars have called a puzzling or foolish step,<sup>12</sup> becomes understandable as part of the cove entrance blocking strategy. If the Athenians had been allowed to occupy Sphacteria, they would have been able to harass the southern ends of the blocklines with missiles from the north shore of the island. Such harassment might have prevented the establishment of a blockline altogether at the short Tortori channel. Only in this context does Thucydides' comment (8.7) that 'the Spartans feared the Athenians would use the island as a military base' make sense, for Sphacteria otherwise could have had no strategic value for either side, especially since its few beaches are too small, even taken together, to have provided a mooring base for the Athenian fleet.

To the objection that the cove harbor could not have been blocked because the Spartans would not have been able to anchor the northern end of their Sikia line on friendly territory, I answer with Grundy that the Sikia channel 'could be effectively obstructed without the northern ships being exposed to missiles from the hostile shore.'<sup>13</sup> The blockline could have been placed at the western end of the channel, where shallow water off Pylos would have prevented it from being outflanked on the north by ships or harassed from land; or it could have been extended only 80 yards across the throat of the Sikia, leaving the northernmost 30 yards open in order to stay out of range of Athenian missiles from Pylos. A mobile squadron of triremes would then be stationed nearby to attack any enemy vessels bold enough to come through the opening along the northern shore of the channel.

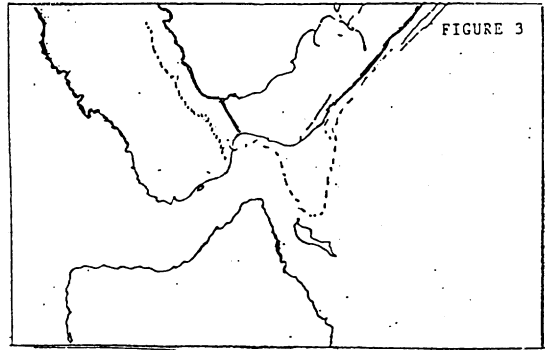


FIG. 3. Tracing of aerial photograph of Pylos, cove harbor area and northern part of Sphacteria. (British Crown Copyright of photograph reserved.)

Thucydides also states in 8.8 that the Spartans hoped their strategy would win back Pylos without their having to risk a naval battle (*naumachia*) in open waters. It is easy to understand why they would find this feature of the plan attractive, for they must have been reluctant to commit their fleet to the kind of battle which had proved so disastrous for them at the beginning of the war, and which they had taken such pains to avoid during the previous three years. By blocking the harbor beach, they would force the Athenians either to withdraw from the area for lack of a fleet base, or to launch a frontal attack against stationary lines of ships in narrow waters with numerically inferior forces. In such a battle, there would be little scope for the Athenians' greatly superior naval skills. Indeed, traditional hoplite virtues might prove more decisive.<sup>14</sup> The Spartans could hope, and with some reason, that their formidable positions would deter the Athenians from attacking altogether. If the Athenian fleet simply withdrew, or withdrew after a failure to break through, the fort probably would have fallen to a short siege as the Spartans planned. Thus by blocking the cove harbor, they had adopted a particularly clever and effective strategy for regaining Pylos with vital assistance from a naval force that was not capable of engaging its enemy in the open sea. The inferior Peloponnesian fleet, in a stationary, defensive position at a crucial spot, could play a decisive role in this campaign.

Thucydides' sketchy description of the Athenian fleet's return to Pylos (13.3) leaves many questions unanswered, but it is possible to infer from it that the Peloponnesian fleet was blocking the cove harbor, at least on that day, and that the strategy was effective. He first says that the Athenians on board ship saw that both the island and the mainland were full of hoplites. If they actually *saw* the hoplites, as Thucydides clearly states,<sup>15</sup> they must have rowed into the bay, for only from well inside the bay are large parts of its shoreline directly visible. While there, Thucydides continues, they also saw the Peloponnesian fleet in the harbor, which can only mean that Thucydides' harbor is somewhere other

<sup>12</sup> For examples of this, see R. M. Burrows, *JHS* xvi (1896) 75; and Donald Kagan, *The Archidamian war* (Ithaca, N.Y. 1974) 230.

<sup>13</sup> See 'Notes to the third general meeting held on March 30, 1896', *JHS* xvi (1896) xlii.

<sup>14</sup> Thuc. ii 89, Phormio's speech is to the point.

<sup>15</sup> See Wilson's (n. 1) discussion, 89, note 1, and that of H.D. Westlake, 'The naval battle at Pylos and its consequences', *CQ* v 24 (1974) 215.

than the bay. Furthermore, if the Spartans were in a harbor that was not the bay, it can be argued that they must have been in the cove because (1) there is no other body of water visible from the bay that could be called a harbor, and (2) because the Athenians would otherwise have gone there to anchor by their fort (as they did the next evening after the battle) instead of going to Prote.<sup>16</sup> Indeed, the only conceivable reason why the Athenians did not go immediately to the cove harbour after their voyage from Zakynthos is that the Peloponnesian fleet prevented them from doing so by blocking its entrances. As the Peloponnesians refused to oblige them by coming out to fight, and the Athenians were unwilling at that time to launch an attack,<sup>17</sup> the latter found themselves without an anchorage and withdrew. All this agrees exactly with Thucydides' hypothetical description of what would happen in his earlier discussion of the Spartan strategy (8.6).

This passage might still apply to the bay, although not as nicely, if the Peloponnesians could have blocked its southern entrance. But the 50 or more Peloponnesian triremes, deployed hull to hull, would only have formed a line approximately 250 yards long. This would have been more than enough to close the combined widths of the Sikia (110 yards) and Tortori entrances (maximum 100 yards from rocks to beach), regardless of the dimensions of the channel within the latter in 425 BC, but totally inadequate for blocking the bay's southern entrance. Bauslaugh<sup>18</sup> is alone in asserting that the Peloponnesian fleet did block that entrance but his blocking scheme is tactically flawed. He assumes that the blocking and moving width of a trireme is 12 yards (6 for the hull and 6 for the extended oars) and proposes a formation in which 55 Peloponnesian triremes deploy with exactly 12 yard spacing between their extended oars. This line, which would extend 1332 yards, is not quite long enough and would require the ships to maintain impossibly precise positions in open and deep water. Moreover, attacking triremes could simply charge full speed against it, retract their own oars at the last moment, and use their momentum to smash the extended oars of a blockship or even coast between them through the line.

Other historians have generally agreed that the Peloponnesian fleet did not try to block the southern entrance to the bay because in fact it could not do so. Without blockable entrances, they have assumed that no plan or attempt was actually made to close off any harbor.<sup>19</sup> Thus, they have interpreted the following

<sup>16</sup> This answers Gomme's complaint (n. 4) 485, that Thucydides 'having said that a fleet at first had no base should explain how it afterwards secured one.' Wilson's [(n. 1) 59] explanation for the Athenian failure to go to the cove is not convincing.

<sup>17</sup> The Athenians might have refused to attack because it was late in the day, because they needed to stow masts and other gear before combat as Wilson (n. 1) 81 suggests, or because they were surprised by the Spartan strategy and needed time to plan a response.

<sup>18</sup> R. A. Bauslaugh, *JHS* xcix (1979) 4.

<sup>19</sup> Wilson's (n. 1) concept of the Spartan plan is unique and perhaps deserves some comment even though it is not the strongest part of his otherwise excellent book. He himself cautioned that solutions to this problem 'should be regarded as more than usually tentative' (p. 73). See his Note F, pp. 73–84.

Concluding that Thucydides' harbor could only be the entire Bay of Navarino and that the southern entrance of that bay was not

day's naval engagement (13–14) as an attack by the Athenians through both entrances of the bay against an unprepared Peloponnesian fleet. They depict the latter as hastily deployed into a line facing its oncoming enemy a short distance from its base on the north shore of the bay. There it is routed by the Athenians in an unusually quick, one-sided, and decisive *naumachia*.

A more plausible interpretation of the battle is permitted by the narrow entrances of the cove harbor. Because Thucydides says that the Peloponnesian triremes had not (yet) blocked the entrances when the Athenians appeared, we must assume that they had withdrawn from the previous day's blockline positions to their base by Gialova. Perhaps they were tricked into doing so that night, as Wilson and Grundy suggest,<sup>20</sup> but it is equally possible that they withdrew every night from their blockline positions as a routine measure (strange as that may seem to us at first) in order to keep their crews fresh for battle with a good meal and a night's sleep, and to avoid the risk that Demosthenes, who still had three triremes and possibly the Messenian ships behind his palisade, might launch an audacious night attack (perhaps a fire ship) against the blockline positions nearby.<sup>21</sup> They would expect their sentries posted on the heights to provide them with sufficiently early warning of an Athenian approach to reestablish the lines well before the enemy's arrival.

In spite of that reasonable expectation, the Spartans do seem to have been surprised by the assault next day, perhaps because the Athenians sailed from Prote in early morning darkness to nearby positions from which their assault was launched at dawn. We know that some of the Peloponnesian triremes even failed to board their crews in time to clear the beach before being attacked (14.1). Although they did manage to launch and deploy most of their triremes, they would not have formed

blockable, and noticing that the entrance to the Voidokoilia cove north of Pylos (Figure 1) had the correct dimension—120 yards—for a 4:1 ratio with the 35 yard Tortori channel, Wilson hypothesized that these last were the channels which the Spartans had planned to block. Thus Thucydides was right about blocking two narrow entrances, right about their proportions and dimensions, but wrong that they were both entrances to a single harbor.

Wilson then argues that the Voidokoilia blockline would have served to prevent the Athenians from landing troops at this cove behind the besieging Spartan forces. Not only would this be a very minor role for almost half the fleet, but given the degree of surprise suffered both by that fleet in the harbor battle, and by the annihilated southern contingent of hoplites on Sphacteria, it seems unlikely that the Spartans were taking any precautions against surprise, much less setting up naval blocklines for that purpose.

The single Tortori channel blockline would indeed have forced the Athenians to forego the use of the Sikia channel if it could have been maintained, but it would have been vulnerable to simultaneous attack from both directions (unless it was doubled and facing out to both sides which Thucydides does not say that it was).

Wilson's scheme would have divided the Peloponnesian fleet into two separated forces which could not have supported each other, one of which (and perhaps both) would have been less numerous than the Athenian fleet. Moreover, it would not have prevented the Athenians from using the cove beach. In the absence of a blockable harbor, Wilson's militarily implausible concept has all the merits of creative, if not desperate ingenuity, but when set against the cove harbor hypothesis, it must give way.

<sup>20</sup> Grundy (n. 2) 32; Wilson (n. 1) 90.

<sup>21</sup> See Thuc. vii 53 concerning the Syracusan fire ship of 413 BC. Also iv 67 for boat raiders from Megara who operated at night.

them into a passive line offshore for that would have been suicidal in the face of superior Athenian naval skills. What they must have attempted instead was to form blocklines at the cove harbor entrances in order to carry out their strategy which had been so successful the day before.

When Thucydides says that 'most' of the Peloponnesian ships reached their stations facing the enemy, he may be implying that their lines were not yet complete or completely organized when the Athenians struck them. Whether there were still gaps, or whether the hastily arranged Peloponnesian ships were simply overwhelmed by the assault, it is understandable that the entire formation would collapse once Athenian ships penetrated the lines at any point because stationary blockline triremes would find themselves highly vulnerable to attack from the rear by others underway.<sup>22</sup> Unable to resist effectively once the position was compromised and pursued 'in the narrow space' (14.1) between the blockline locations at the cove harbor entrances and the nearby land, the Peloponnesian ships fled to friendly shores so that their crews could escape capture.<sup>23</sup>

Unfortunately, Thucydides' disjointed description of the battle seems more a set of notes than a complete narrative and will not allow a single definitive interpretation. Some speculation is necessary in order even to arrive at a coherent, much less a plausible solution. But the narrative's sudden and complete rout more likely depicts the piercing and subsequent abandonment of a blockline position than an open water *naumachia*; and the cove harbor entrances provide both a tactical rationale for the battle and a unique location where the Spartan blocking strategy, so carefully described by Thucydides, can be carried out.

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<sup>22</sup> See Thuc. ii 91 for a discussion of the vulnerability of ships at rest near ships in motion.

<sup>23</sup> There need be no contradiction between Thucydides' description of a harbor that 'is not small' (14.1) and a pursuit there 'in the narrow space' (14.1) because whatever the harbor's size, the battle could have taken place near shore, leaving little room for pursuit. If in fact it did occur at the cove harbor entrances, Thucydides himself describes these as narrow straits near which land would necessarily be found and the space for pursuit would naturally be constricted.

### WALWE . and . KALI .

Twenty electrum coins, of similar early Anatolian lion-head types, are stamped with the legend WALWE .

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The following special abbreviation will be used: Weidauer=L. Weidauer, *Probleme der frühen Elektronprägung*, Typos iv (Fribourg 1975).

or some part of it.<sup>1</sup> This legend, retrograde, was situated on the die between two facing lion heads. Although extant coins of this kind, none larger than 'thirds', reproduce only one lion head (facing either left or right), traces of the opposing snout on seven of the twenty coins permit reconstruction of the type.<sup>2</sup> The legend itself is often incomplete—or else absent altogether. However, as Weidauer points out, the location of extant letters in relation to the lion head seems to indicate that it began with the initial digamma and was not longer than six letters.<sup>3</sup> One of these twenty coins was found in the Central Basis deposit of the Artemision at Ephesos; a majority of the twenty are die-linked. This is therefore a particular series, struck some time probably around 600 BC.<sup>4</sup> The coins appear to be of Lydian origin and issued by the state: for the digamma had for a long time been largely vestigial in East Greek alphabets (but was used in Lydian);<sup>5</sup> the lion was probably the royal symbol of Lydia;<sup>6</sup> and many other

<sup>1</sup> These are fully published by Weidauer 25-7, nos. 91-113: twenty-three coins in all, but the legend is completely missing from 104, 106 and 107 as a result of minting procedures (see n. 2 below). However, these three coins are reverse die-linked with coins of the WALWE . series. There are also four coins (Weidauer nos. 76-8, 84) of a different lion-head series which are reverse die-linked with coins of the WALWE . series.

<sup>2</sup> The explanation of this phenomenon here cannot be that the dies were designed to mint staters, and thus on smaller coins the type would only partly be reproduced. For as Weidauer observes (46-7), on smaller denominations the lion heads are in fact smaller. Weidauer concludes from this that the incomplete types are not the result of any minting process but had 'a specific purpose'—which is left unspecified. One explanation might be suggested. Having planned to strike coins with two lion heads, it was discovered that if both heads were to appear on the round flan the heads would have to be quite small in relation to it. The mint adopted the odd but more impressive solution of fully reproducing only one. This problem was resolved by the time of the earliest gold and silver coinage (the 'Croesids') by producing the oblong flans (stamped with lion and bull) that are characteristic of it.

<sup>3</sup> Weidauer p. 60, and see J. H. Jongkees, *Acta Orient.* xvi (1938) 254-5.

<sup>4</sup> In advance of the publication of the BM symposium (March 1984) on the date of the Ephesian Artemision, I shall not discuss that controversial issue. Most scholars have accepted a date c. 600 BC or a little later for the initial construction and the Basis Deposit; M. J. Price (*Studies in numismatic method presented to Philip Grierson* [Cambridge 1983] 1-4) suggests a date possibly as late as c. 575 for the Deposit, which implies a date somewhat earlier for the WALWE . series. Price also believes (*Studies in honor of Leo Mildenberg*, edd. A. Houghton et al. [Wetteren 1984] 221 n. 25, and see also Weidauer 107) that 'both on typological and on stylistic grounds' the WALWE . series belongs late among the various issues of electrum coinage (which he thinks continued through the reign of Croesus [c. 561/0-c. 547/6]). Price's basis for this argument (and see *Studies Grierson 2*) is a stylistic and typological resemblance between this series and the Lydian bimetallic 'bull and lion' coinage, dated 'not much before the middle of the century' (ibid. n. 9), or after Croesus' fall (*Studies Mildenberg*, passim). However, the inconsistency between a date close to 550 or after 546, and a date before c. 575, must discourage the use of typological and stylistic observations as a criterion for dating. Since the question of chronology is largely irrelevant to this article, I shall not discuss the arguments of M. Vickers (*NC cvl* [1985] 1-44) that coinage may have begun not earlier than the 540s. (However, see my comments in *AJA* 1987 [nn. 1, 42].)

<sup>5</sup> See L. H. Jeffery, *The local scripts of archaic Greece* (Oxford 1961) 325-7, 345, 359-61, 289 and Weidauer 60-61. The point was first made by J. P. Six, *NC<sup>3</sup> x* (1890) 205.

<sup>6</sup> See J. G. Pedley, *Sardis in the age of Croesus* (Norman, Okla. 1968) 72 and n. 56 below; for an overview of lions at Sardis, see G. M. A. Hanfmann and N. H. Ramage, *Sculpture from Sardis* (Cambridge, Mass. 1978) 20-22.