

FRAGMENTS OF NAVAL INVENTORIES FROM THE ATHENIAN AGORA

(PLATES 42–44)

THE MAJORITY OF THE FRAGMENTS of the 5th- and 4th-century Attic naval inventories were found in Piraeus, but several pieces were also discovered in Athens.¹ These sections include one from the Agora Excavations, Inv. No. I 5419, which joins both *IG II*² 1628 and 1630.² Several other fragments, Inv. Nos. I 2012*a–c*, I 3227, and I 2542, were brought to light in the Agora during the 1930's and were published by Eugene Schweigert.³ In this study, these Agora fragments have been redated and provided with the first full commentary, and I 2542 has been dissociated from the other pieces. Two more sections of naval inventories, Inv. Nos. I 7316 and I 7450, found in the early 1970's in Section PP, are published here for the first time. These fragments represent parts of at least three different documents all belonging to the decade of the 350's B.C. With the exception of I 5419, none of the Agora pieces belongs with any of the previously known inventories.

The documents are all inscribed with the typical mid-4th-century small even letters on marble stelai. Unfortunately, the text of none of the inscriptions gives an archon year for the documents, but the texts indicate the relationship between the Agora fragments and the known inventories of the 350's, *IG II*² 1611–1619; hence the date of the inventories found in the Agora may be determined.

¹ Many people have helped to make this article possible, and I am very grateful to all of them. First and foremost were the Field Director of the Agora Excavations, T. Leslie Shear, Jr., and the Resident Director, John McK. Camp II, who first allowed me to examine these inscriptions and then asked me to publish them. They have both been more than generous with help on readings and interpretations and helped eliminate many egregious errors. The staff at the Agora unfailingly and cheerfully provided access to the inscriptions, photographs, and an ideal place in which to work. At the Epigraphical Museum in Athens, Mrs. Peppa-Delmousou very kindly allowed me access to comparative material, and the staff made my work pleasant and without problems. William D. E. Coulson, the Director of the American School of Classical Studies at Athens, made the library facilities available during the course of several summers and my year as a regular member in 1992/1993, for which I am extremely grateful. At the American School, during the winter of 1992/1993, John Traill and the students in his epigraphy seminar provided a forum for discussion, and their suggestions have removed several erroneous readings; their patience with yet another new reading and their encouragement were greatly appreciated. I have benefited also from the comments of the two *Hesperia* readers, who kindly helped me eliminate a large number of minor errors. Since the paper started as a part of my senior honors thesis at Harvard, I owe my advisor, Professor David Mitten, a probably unpayable debt for patience, tact, encouragement, and many useful suggestions which made the thesis, and indirectly this article, possible. My two readers, Professors Ernst Badian and Ian Rutherford, carefully read the entire thesis, and their comments have been most valuable. Finally, Professor Sterling Dow, during the course of many afternoons overlooking the Charles River, gave me much advice, encouragement, and many comments both about naval inventories and about epigraphy in general. He also encouraged me not to leave this material once my thesis was finished but to present it to a broader audience. For all his advice and teachings, I am extremely grateful.

² Laing 1968.

³ Schweigert 1939.

Hesperia 64.2, 1995

The earliest of these fragments are I 3227 and I 2012a-c, representing parts of one inventory and thought by Schweigert to be a copy of *IG II*² 1611, which is firmly dated to 357/6.⁴ Several aspects of this interpretation were not considered by Schweigert. All four of the fragments were found in modern disturbed contexts, which do not necessarily indicate their original location. Since Schweigert's publication, more fragments have been found in the Agora; one of them, I 5419, firmly joins both *IG II*² 1628 and 1630, which were found in Piraeus.⁵ Thus the discovery of naval-inventory fragments in the Agora does not require that the fragments be copies of those in Piraeus; rather, they were clearly part of the original group of documents erected in Piraeus and later transported to the city. The document represented by I 3227 and I 2012a-c is also arranged differently from *IG II*² 1611. Cols. I and II list equipment on ships which is not listed in the first two columns of *IG II*² 1611 but in Cols. III, IV, and V. If this document actually were a copy of *IG II*² 1611, one would expect the same order to have been used. Finally, copies of any inscription were rare and usually occurred when such duplications were necessary, as, for example, in the case of inscriptions which were to be erected in the Sanctuary at Eleusis and also the City Eleusinion. In the case of the naval inventories, no such duplication was necessary.

These two almost identical documents represented by *IG II*² 1611 and the four fragments from the Agora should be very close to each other in date. Of the thirty-six ships listed in Col. II of I 2012c, twenty-five are known to have been of the class ἐξάλρετοι, or "special". Of the remaining eleven names, three represent ships' names not preserved elsewhere in the class;⁶ three represent ships not previously known to exist at this period; three represent ships of unknown class; one represents a ship known only as "second" class; and one represents a "first" class ship. Many of these ships are also named in *IG II*² 1611 under the heading of ἐξάλρετοι;⁷ hence the ships on the Agora fragment also belong to the class ἐξάλρετοι. The last nine ships in this list, Φῶς through Βοήθεια, also appear in the same order, with the inclusion of the Σφενδόνη, in *IG II*² 1611.⁸ This inscription records the ἐξάλρετοι ships that were built during the archon year 358/7. The similarity suggests that the inventory

⁴ Schweigert 1939. His fragment E, I 2542, does not belong to this document. It was very clearly cut by a different hand. *IG II*² 1611 can be no earlier than 358/7, since it mentions ships built in that archon year (lines 119–133). Line 134, which is badly damaged, contained either another entry referring to the ships built in 358/7 or the heading for the ships built in 357/6. The latter restoration is much more likely since the preceding seven lines seem to concern the last ship built in 358/7, and the list of ships built in 358/7 corresponds well with that preserved in the inventory of that year. The date of *IG II*² 1611 is further confirmed by the list of trierarchs and by the ships that were out of the harbor at the end of the year, now extant as I 3227 and I 2012a-c; see p. 183 below. Four men listed here in lines 288, 291, 292, and 325, Polyuktos of Lamptrai, Aristokles of Eleusis, Periandros of Cholargos, and Habrionides of Ko[-], also appear in *IG II*² 1953, lines 5–8, which is a list of trierarchs in the Hellespont in 357/6. Since these men were on ships which were said in *IG II*² 1611 to be at sea, this inventory must also date to 357/6. Ruschenbusch disagrees with this date and places *IG II*² 1611 in the year 356/5 (Ruschenbusch 1987a). His argument is not convincing. His emphasis on the unique character of 1611 is mistaken in view of I 3227 and I 2012a-c.

⁵ Laing 1968: commentary on *IG II*² 1628 and 1630.

⁶ For the references to these ships' names and all others cited in this article, see the register provided by Schmidt: Schmidt 1931, pp. 96–99. In this register, Schmidt gives the cross-references to the epigraphical sources and his two main discussions of each name.

⁷ *IG II*² 1611, lines 157–170.

⁸ *IG II*² 1611, lines 119–129.

recorded in I 3227 and I 2012*a-c* must belong to the year 358/7, since *IG II² 1611* is shown by the construction dates of the ships of the ἐξάλρετοι class to belong to the following year, 357/6.

The preserved section of I 2012*c* does not record the ἐξάλρετοι ships built during the year but rather the equipment assigned to these ships. It may seem strange that newly constructed ships should be listed in the equipment section of the document, but the explanation is quite simple. This portion is a list of πηδάλια, or steering oars, on the ships, as is clear from line 52, and without which the ships would not be able to move. Πηδάλια, therefore, had to be assigned to ships under construction so that they could be transported from the shipyard to the ship sheds at the appropriate harbor. The Βοήθεια already had her πηδάλια in 358/7, even though she was unfinished at the end of the year, as is recorded in *IG II² 1611*.⁹

I 7316 and I 7450 are later than the inventory for 358/7 and represent the documents for the two years after that of *IG II² 1612*, firmly dated to 356/5.¹⁰ The two fragments do not come from the same stele because the inscriptions were carved by two different hands. I 7450 was well cut, with no mistakes, and the lines of different columns are aligned. I 7316 contains several mistakes, and the lines of the columns are not aligned.¹¹ Both fragments record equipment owed by trierarchs. The date of these fragments can be established by the internal evidence of the text. The reference to a symmory in line 47 of I 7450 indicates that it must date after 358/7, the year in which the symmories were introduced.¹² A closer date is provided, however, by examining the formulas used to list the equipment and the ship upon which the trierarchy was performed. Two formulas occur on both fragments, while a third occurs only on I 7450. The phrase ἄς ἐπὶ τήν plus a ship's name is used on both

⁹ *IG II² 1611*, lines 127–133. The wording of this section also makes it clear that some, if not all, ships were not built in state shipyards. The Βοήθεια came ἐκ τῶν Τηλεγονεῶν ναυπηγῶν, where she was built. If this shipyard was owned by the state, it would not have been necessary for it to be identified in the inventory. The shipyard is attested only here in *IG II² 1611*, lines 132–133.

¹⁰ *IG II² 1612* is similar in form to the inventories of 358/7 and 357/6. It provides the same information and uses some of the same phrases, but the information is presented slightly differently. The ships and the equipment on them are listed first and then are followed by the totals of ships and gear, which appear first in *IG II² 1611*. Next are listed several specific groups of ships, and finally, the trierarchs owing equipment. Among the trierarchs owing equipment is Philinos of Lakiadai on the Εὐτυχία, *IG II² 1612*, lines 282–287. This trierarchy was performed during 357/6 (*IG II² 1611*, lines 361–369). Since the ship was still at sea at the end of 357/6, the equipment would have been owed in the following year. Thus *IG II² 1612* is dated to 356/5. Ruschenbusch (1987b) dates this inscription to 355/4, but his alleged difficulties are not actually problems; they were caused by his mistaken view that the inventories were made at the beginning of the Athenian official year rather than at the end.

¹¹ One of these mistakes was originally cutting a zeta for a sigma in line 12. Instead of erasing the zeta, the mason cut the sigma over it. This same mistake also occurs in I 2542, line 5, which may thus belong with I 7316. Other mistakes in I 7316 include the omission of the letter tau in line 49, Νυκίαν Λαμπ(τ)ρέ[α]; carving ἐβλομήχοντα[–] for ἐβδομήχοντα[–] in line 41; in line 5, carving παραρύμλτα λευκ instead of παραρύματα λευκ; and in line 11, ΕΘΟΝΗΤΟ may be a mistake for Θεόγνητος and ΓΡΑΕ for Γαργήτιος.

¹² Demosthenes 21.154–155; [Demosthenes] 47.21; Jordan 1975, pp. 73–83. Jordan (p. 74) states that the law did not take effect until 357/6, while Hammond (1975, p. 516) says that the system was introduced in 357. Certainly the law was in force when the events of [Demosthenes] 47 took place because the law is specifically mentioned by name (47.21) and the date is given as 357/6 (47.44). From the language of 47.21, it is tempting to infer that this law had just been introduced.

fragments,¹³ as is δ ἐπὶ τήν plus a ship's name.¹⁴ The third phrase, $\delta\upsilon$ ἐπὶ τήν plus a ship's name, is only found once on the Agora fragments¹⁵ but is otherwise attested at *IG* II² 1612, line 312. The other two phrases are more common, but, outside the fragments I 7450 and I 7316, are only used on 1612. The first, $\delta\varsigma$ ἐπὶ τήν, is used only twice, while the second, δ ἐπὶ τήν, is used fifteen times.¹⁶ All these cases are comparable because the formulas are used in the sections describing material owed by the trierarchs. Since the formulas are confined to *IG* II² 1612, I 7316 and I 7450 must be closest in date to this inventory and should be placed between *IG* II² 1612 in 356/5 and *IG* II² 1613/1614 in 353/2.

Both of the Agora fragments also include the verb ὤφειλεν or ὤφειλον, immediately after the ship's name, a usage seen elsewhere only in *IG* II² 1612.¹⁷ In all three, the verb is placed only after the first ship's name and not after the name of subsequent vessels itemized under the same trierarch. In both *IG* II² 1612 and I 7316, the singular is used either after the name of one trierarch or when the second trierarch's name is preceded by the phrase ὧν μετά.¹⁸ Likewise, the use of the term κεραῖαι ἀκάτειοι, rather than the more common κεραῖαι ἀκάτειαι, in I 7450 and *IG* II² 1612 and 1613/14, necessitates dating the Agora fragment between the two other inventories.¹⁹ These similarities between *IG* II² 1612 and I 7316 and I 7450 reinforce the suggested date between *IG* II² 1612 and 1613/14. The *terminus post quem non* of 353/2 is confirmed by the mention of the Εὐτυχία in I 7450, line 18. Since this trieres was judged to have been destroyed by winter storms during 353/2 and the trierarchs of that year were held responsible, the reference here must precede that year.²⁰ Further evidence for the date of I 7450 is provided by the mention of Habronides of Ko[-] (*PA* 18), in line 52, as on active duty in the year of the inventory on the ship Ἐως. Since he was also a trierarch in 357/6 in the Hellespont on a different ship²¹ and trierarchs were exempt from duty for two years after each trierarchy,²² this inscription can date no earlier than 355/4, but it could also date to 354/3. I 7316 therefore belongs to whichever year I 7450 does not.²³

¹³ This formula, as with the other variations, was a shorthand for "the following equipment, which was used on [the ship's name], the equipment enumerated was owed by [the trierarch's name]." The phrase $\delta\varsigma$ ἐπὶ τήν plus a ship's name is translated "the equipment (understood) which was on [the ship's name]." See I 7450, lines 14, 16, 18; I 7316, line 50.

¹⁴ I 7450, lines 21, 29; I 7316, lines 2, 4, 7, 12, 19, 28, 30, 34, 36, 39, 46.

¹⁵ I 7450, line 26.

¹⁶ $\delta\varsigma$ ἐπὶ τήν is used at *IG* II² 1612, lines 322, 359. δ ἐπὶ τήν is used at *IG* II² 1612, lines 272–273, 289, 291, 294, 302, 315, 317, 325, 334, 348, 354, 361, 365, 371, 380.

¹⁷ In *IG* II² 1612, ὤφειλεν is preserved in lines 292, 318, 344 and restored in lines 266, 280, 318, 361, 365; ὤφειλον is extant in lines 273, 302, 348 and restored in lines 20, 294, 312, 315, 325, 334, 354, 371, 380. For the usage in I 7316, see lines 3, 8, 13, 28, 34, 47, 51 (p. 207 below), and in I 7450, lines 21, 27 (p. 216 below). Contrast *IG* II² 1611, lines 374–441.

¹⁸ *IG* II² 1612, lines 264, 282, 342; I 7316, lines 10–11.

¹⁹ I 7450, line 31; *IG* II² 1612, lines 34, 329; 1613, line 231; 1614, line 146. For a discussion of this piece of equipment, see commentary on I 2012c, lines 7–17, p. 193 below.

²⁰ *IG* II² 1613, lines 202–211.

²¹ *IG* II² 1611, line 325; *IG* II² 1953, line 6.

²² Isaios 7.38; Jordan 1975, pp. 91–92.

²³ The mention of equipment owed by other men, including Chares in connection with two different ships, I 7450, lines 25–31, does not help date the fragment because we cannot tell in which years these trierarchies

I. ATHENIAN AGORA I 2012*a-c* AND I 3227

These four fragments were found during the excavations of the 1930's in the Athenian Agora. They belong to the same stele: I 2012*c* and I 3227 both preserve the left edge of the stele (Pl. 42), and I 2012*a*, *b* record text from the center of the stone (Pl. 43). Since I 2012*c* also preserves the bottom of the stele, the original location of I 3227 must have been higher up on the left side. Cols. I and II appear on both of these two fragments. Both fragments have anathyrosis on their left sides, indicating that originally another block, presumably the stele recording the inventory of 359/8, was set against the left side of the inscription. These stelai must have stood in a continuous base, as did the casualty lists and the sacred calendar from the Royal Stoa.²⁴ I 2012*a* does not preserve any of the original edges of the stele and appears to come from the middle. The left column on this fragment, Col. IV, cannot, therefore, be part of the same column as Col. I on I 2012*c*. Hence, it has been labeled Col. IV. The second column on this fragment, Col. V, records the total quantity of equipment. The information is also preserved on I 2012*b*. These two columns should be the same, and fragment *b* should have been lower on the stone than fragment *a* because the anchors usually follow the *παρὰρύματα* and the *ὑποβλήματα*; compare *IG* II² 1611, lines 235–267 and *IG* II² 1612, lines 71–86. I 2012*a* and *b* do not join, and the lost portion of Col. V contained entries for the *καταβλήματα* and the *σχονία*. The text of Cols. I–III probably records the ships and equipment of one harbor, while Cols. IV and V list the vessels and gear assigned to another. One of the characteristics of this inscription is the use of *-ει* instead of *-ηι* for the ending of the dative singular of the first declension; this substitution is also typical of the period.²⁵

I 3227

This fragment of a naval inventory was found in a modern house wall on January 9, 1936, in section P at N/8. The piece of Hymettian marble preserves two columns of non-stoichedon text (Pl. 42). The inscribed face and left edge are preserved; the face is worn and flaky. Traces of anathyrosis are preserved on the left edge of the fragment. The letters are fairly well cut and spaced. The fragment comes from the front of the inscription and is from the same document as I 2012*a-c*. The columns labeled I and II here are part of the same Cols. I and II found on I 2012*c* but from a point nearer the top of the stele. Previously published: Schweigert 1939, no. 5, fragment A.

P.H. 0.15 m.; p.W. 0.17 m.; Th. 0.086 m. L.H. 0.005 m.

were performed. They must have been performed at least in the year before the inventory in which they were recorded, but they could also have been earlier. If we assume that the trierarchies of Philinos in I 7450, lines 20–24, and Menestheus in I 7316, lines 18–25, occurred in the year immediately preceding the inventory, the dates could be further clarified; see commentary, pp. 218–219 below. It is just possible that one of these inscriptions actually belongs to *IG* II² 1612, but since *IG* II² 1612 was not available for personal autopsy, I was not able to compare the inscriptions. It seems unlikely to me unless the text represents the front of the stele and the reverse was entirely taken up with debts. The debts in this period, however, do seem to be that numerous. Thus it is safer to assume that *IG* II² 1612 is a separate inventory from both I 7316 and I 7450.

²⁴ Bradeen 1964, pp. 23–24, 25–29; Dow 1961.

²⁵ Threatte 1980, p. 369.

a. 358/7 a.

NON-ΣΤΟΙΧ.

Col. I

Col. II

[at least 52 lines of text]

	[---8-9---]ει, Ἀρετῇ		Ἰππ[οθωντιδ]ι, ---]
	[---5---]ι ἐνδεῖ περί ΔΓΙΙΙΙ.		Ῥώμη[ι, Ἰκανῇ,]
	[Με]λίττε[ι], Πρώτε[ι,]		Πανδία[ι, vacat]
	[Ἀκ]ρυπ[τ]ά[τει], Ὡρωι,		τῶν δευτ[έρων]
5	. . ἀμοσ[ύνει], Ο[---]	20	Τροπαί[αι ἐνδεῖ]
	[Φι]λήνεμο[ι Εὐ]γῆωι		περίνε[ων ----·]
	[ἐνδεῖ] θαλα ΙΙΙ.		Ἀποτομ[άδι ἐνδεῖ]
	[ἀριθ]μός · Η		θαλα ΔΓΙΙ [---·]
	[Πη]δάλια.		Εὐνοίαι, [vacat?]
10	[ταῖσδ]ε τ[ῶν] νεῶ[ν τ]ο-	25	Πανθήρ[αι ἐνδεῖ]
	[ύτων] ἐν [τ]οῖς νεωσ-		περίνε[ων ----·]
	[οἰκοι]ς [π]ηδάλια		Βοηθεία[ι, vacat?]
	[παρα]κείμενα		Μεγίστει ἐ[νδεῖ]
	[κατ]ελάβομεν.		περίνεων Δ[----·]
15	[τῶν πρώ]των.	30	Ἀκοῇ, Ἰπποκ[άμπει,]
			Ἀλκυόνι ἐνδ[εῖ]
			[περίνεων ----·]

Epigraphical Commentary

Lines 1–2: In both of these lines, not enough of the first name is preserved and the possibilities are too numerous to make any restoration possible.

Line 4: The dotted rho is preserved as the top, rounded portion of the letter. Only two names, both previously unattested, can possibly fit the space and letter combinations: the Ἀκρυπτάτη, “most unhidden, most visible”, and the Ἀθρυπτάτη, “most imperishable, most visible”. Other ships whose names mean visible or manifest include the Δηλιάς, Δῆλος, and Φανερά; other names meaning divine or immortal include the Δία, Πανδία, and Ὀλυμπιάς. I have restored Ἀκρυπτάτη here because it fits the space better, as well as by analogy with I 7450, line 14 (p. 216 below). Other ships whose names have the form of superlative adjectives include the Κρατίστη, Ἀρίστη, Ἠδίστη, Μεγίστη, Πανταρίστη, Πολυαρίστη, Κουφοτάτη, and the Νεωτάτη. [. . .]ρυπ. α[---3] Ὡρωι Schweigert.

Line 5: Of the dotted letters, the alpha is visible as the top half of the left diagonal, the second omicron as the left and bottom right three-quarters of a round letter. The name of the first ship in this line should be either the Δραμοσύνη, “ceremony”, or the Θεαμοσύνη, “sight or spectacle”; compare Ἑορτή, “festival”, and Θέαμα, “spectacle”. Both suggested names are unattested and seem to fit the space equally well. Not enough letters of the second name are preserved to allow a restoration. . . ἀμοσ[---] Schweigert.

Line 6: The new name Φιλήνεμος, “wind loving”, seems to fit better than the possible Ποδήνεμος, “wind swift”. Other names beginning Φιλ- are known and include the Φιλονίκη and the Φιλοτιμία; for ships’ names mentioning the wind, compare the Αὔρα and Τροπαία. The name Εὐνεως, “good ship”, is not previously known, but it fits the space and letter combinations, which are otherwise awkward. Other ships whose names begin with the prefix Εὐ- are known, including the Εὐαμερία, Εὐδαίμωνια, Εὐδία, Εὐδόκιμος, Εὐδοξία, Εὐετηρία, Εὐήμερια, Εὐία, Εὐκαρπία, Εὐκλεια, Εὐλιμένη, Εὐνοια, Εὐνομία, Εὐπλοια, Εὐπορία, Εὐπρεπής, Εὐτύχης, Εὐφημία, Εὐφραίνουσα, Εὐφροσύνη, Εὐφυής, and Εὐχαρίς. Two known names with “ship” are the Ναύκρατις and Ναυκρατοῦσα. [. . .]εγεμο. . γεγων Schweigert.

Line 8: The dotted omicron is preserved as the left half and lower right three-quarters of a circle.

Lines 16–17: These restorations follow Schweigert. The restoration [Ἰκανῇ] seems to fit the space.

Line 30: The restoration of the second ship’s name follows Schweigert.

Lines 1–7: These ships must be in a section under the heading ταρρός. Some of them are lacking oars so that their ταρροί are not complete. If only the ship's name is given, as in line 1, then the ship has a complete ταρρός, but if the ship's name is followed by the notation ἐνδεῖ, a type of oar, often abbreviated, and a number, the ship is missing those oars. The construction used here is “on the ship (dative) there is lacking of oars (genitive), so many.” When the ship has a full set of oars, the construction must be understood as “on the ship (dative) there is not lacking oars (understood).” The ships listed here are all second-class vessels; cf. I 2012c, lines 17–31 (p. 191 below).

The triereis²⁶ were powered both by oars and by sails. The oars were used when great speed was desired, in battle, in other situations which required precise movements, such as coming into port, and, of course, when there was no wind. The oars are listed in the inventories either as κῶπαι or as ταρρός. When κῶπαι is used, the oars are often specified as being θρανίτιδες, ζύγαι, or θαλάμιαι;²⁷ here in I 3227, lines 7 and 23, the abbreviation θαλα is used for θαλαμίων (θαλάμιαι), while at line 2, περί for περίνε (περίνεω). The total number of oars for one vessel was 200: sixty-two κῶπαι θρανίτιδες, fifty-four κῶπαι ζύγαι, fifty-four κῶπαι θαλάμιαι, and thirty κῶπαι περίνεω.²⁸ The κῶπαι περίνεω are spare oars which would replace any broken oars from the other 170. The difference between the oars used on each level was not length; the oars had the same exterior length on all three levels. The length of the handles, however, varied half a cubit depending on their horizontal position on the ship; longer oars were used amidships, while shorter oars were used in the stern and bows.²⁹ Thus the overall length of the oars was either nine or nine and a half cubits.³⁰ The oars for each level were sufficiently similar that on one occasion the inventory notes that of the κῶπαι θρανίτιδες on the Πολεμονίκη, ten are in fact κῶπαι ζύγαι and were initially misidentified.³¹ Morrison originally thought that the difference must be in the blades of the oars, but experimentation during the sea trials of the restored trieres *Olympias* has proved that exactly the same oars can be used on all three levels. Thus perhaps the difference has to do with either the gearing or the construction of the handle.³²

²⁶ It has seemed to me that one ought to follow the example of Morrison and transliterate τριήρης rather than use the latinized word “trireme”, which unfortunately carries too many erroneous connotations and is thus not conducive to a fresh approach to ancient naval matters. See also Morrison and Coates 1986, pp. 1–24.

²⁷ These three terms describe the three levels of rowers. The θρανίται rowed on the uppermost level, the ζύγιοι rowed in the center level, and the θαλάμιοι rowed on the bottom level. For some examples of these terms used with the word κῶπαι, see IG II² 1604, line 44 and *passim*; IG II² 1606, *passim*.

²⁸ IG II² 1615, lines 17ff., 38ff., 56ff., 79ff., 108ff.; 1616, lines 10ff., 27ff., 59ff.; 1618, lines 32ff., 52ff.

²⁹ Aristotle, *PA* 4.10.687b18; *Mech.* 4.840b10; Galen, *UP* 1.24; Michael Ephesius, *Comm. in Arist. Graec.* (M. Hayduck, ed.), 22.118.15; Morrison and Williams 1968, pp. 289–290.

³⁰ The κῶπαι περίνεω also varied, because they might have to be used in any part of the ship. In IG II² 1607, the κῶπαι περίνεω are specified as being either ἐννεαπῆχες, nine cubits, or ἐννεαπῆχες καὶ σπιθαμ(ίας), nine cubits and a span in length; IG II² 1607, lines 9–10, 14, 22, 23, 55, 98; also IG II² 1606, line 44. Of these references, IG II² 1606, line 44 and 1607, lines 22, 55, 98 can only refer to ἐννεαπῆχες, while IG II² 1607, line 14 can only refer to ἐννεαπῆχες καὶ σπιθαμ(ίας). IG II² 1607, lines 9–10 and 23 could refer to ἐννεαπῆχες or ἐννεαπῆχες καὶ σπιθαμ(ίας) since only the beginning of ἐννεαπῆχες is preserved.

³¹ IG II² 1604, lines 55–56; Morrison 1978, pp. 151–152.

³² For discussion of oars in secondary literature, see Morrison and Williams 1968, pp. 289–291; Casson 1971, pp. 82–84; Morrison and Coates 1986, pp. 130–151.

The term *ταρρός* is used to describe a complete set of oars. It regularly appears in the singular and usually not in connection with the word *κῶπαι*, except in the totals of equipment.³³ In *IG II² 1628*, for example, the *ἐπιμεληταί* of the *νεώρια* (shipyards) state that they received 297 *ταρροί* for trierei and sixty-eight *κῶπαι*.³⁴ From the statement, it is clear that the sixty-eight *κῶπαι* were not the total number of oars in the *ταρροί* but the number of extra oars, which were not enough to form another *ταρρός*. In the two following lines, the *ταρρός* for the horse transports is listed; they are specified as having sixty oars each.³⁵ The inventories, however, never list the total number of oars in the *ταρρός* of a trieres or a tetreres. No major structural changes seem to have occurred in the form of the trieres after the inventories that listed the total number of oars on board the ships were made. Thus it seems probable that the total number of oars in the *ταρρός* of a trieres was 200.

In a description of an attempted attack on Piraeus by the Peloponnesian forces in the winter of 429, Thucydides describes men walking across the Isthmos to unmanned ships on the Saronic Gulf side. He says: *λαβόντα τῶν ναυτῶν ἕκαστον τὴν κώπην καὶ τὸ ὑπηρέσιον καὶ τὸν τροπωτῆρα*.³⁶ Here *τὸ ὑπηρέσιον* is a cushion, and *τὸν τροπωτῆρα* is an oar strap. The *τροπωτῆρ* was used to hold the oar against the thole pin during the oar stroke. It is a crucial piece of equipment, but it is never mentioned in the naval inventories. Since the rest of the equipment needed on the ships was provided by the state, it is very unlikely that the rowers would have had to provide their own oar straps. Either the oar strap was considered an integral piece of the equipment, or the *ταρρός* included the oar straps while the *κῶπαι* referred only to the oars themselves.

Line 1: The ship *Ἀρετή* was listed as a second-class vessel both in 358/7 and in 357/6: *IG II² 1611*, lines 85, 153.

Line 2: The name of this ship is not preserved. The abbreviation *περί* stands for *περίνεων* oars, of which this ship is lacking eighteen.

Line 3: The *Μέλιττα* is also listed with equipment in the year of *IG II² 1616*, when Diokles of Alopeke seems to have been in charge of the symmory: *IG II² 1616*, lines 24ff. This *Πρώτη* is listed only here, but two other ships of this name existed and are listed in *IG II² 1604*, line 95 and *1632*, line 92.

Line 4: The name of the first ship, the *Ἀχρυπτάτη*, is not preserved elsewhere in the naval inventories.

The majority of ships' names in the Athenian navy during the 4th century were generally abstractions with positive connotations, as is clear from Schmidt's register of names.³⁷ In form, the names were adjectives, participles, or nouns, obvious examples of which are the *Ἀγαθή*, "good", the *Ἐρωμένη*, "beloved", and the *Βοήθεια*, "aid", all attested in *I 2012c*. The attested names can be divided into a variety of categories: names with connotations of victory, honor, fierceness, power, the military, the navy, lightness, movement, saving,

³³ The one exception is *IG II² 1607*, line 6, which states: *αὕτ(η) ἔχει ταρρόν· ἐνδεὶ κωπῶν θαλαμίων* [—]. Unfortunately, the text is not preserved after the word *θαλαμίων*, so that the number of missing *κῶπαι* *θαλαμιαί* is not preserved.

³⁴ *IG II² 1628*, lines 150–153.

³⁵ *IG II² 1628*, lines 154–155.

³⁶ Thucydides 2.93.2.

³⁷ See note 6 above.

animals, plants, youth, beauty, perfection, excellence, nobility, prosperity, etc. These names only make sense if we take the names literally. That the meanings of ships' names were taken literally is clear from a passage in the *Moralia* which gives typical names: the Εὐπλοία, Πρόνοια, Σφζουσα, and Θεραπεία.³⁸ The first three of these four names were, in fact, used for ships in the Athenian navy.³⁹ The evidence thus suggests that it was the literal meaning of the name which was important. Ships apparently named for minor divinities or heroes were so called not for the individual but the literal meaning of the name. The Πρόκνη is the "Nightingale", a bird, not the mythical woman, and the Θέτις is the "Daughter of the Sea", an appropriate name for a ship, not the mother of Achilles. The Θέτις was not the only ship whose name meant "Daughter of the Sea": the navy also included the Ἀμφιτρίτη, Νηρηΐς, and the Ὠρεΐθουα.⁴⁰

Likewise, ships with names which might be interpreted as the names of cities or places were chosen for their literal meanings.⁴¹ The Ἀμφίπολις, for example, did not refer to the city in Thrace of the same name but to the literal meaning of the name, "Encompassing City". Such a name suited the aspirations of Athens and is paralleled in such examples as the Ὀρθόπολις and the Σωστίπολις, the "Upholding the City" and the "Saving the City", respectively. The name Ἐλευσίς means "arrival", and this idea of advent is also found in the ships' names Εἰλεΐθουα, "she who comes",⁴² and the Ἰοῦσα, "coming". Other names, which might be understood to be derived from Attic demes, were also chosen for their literal meaning: the Παλληνίς, "Of a Maiden", and the Κωλιάς, "Hindering".⁴³ They belong respectively to the categories of youth, which includes Ἡβη and Νεᾶνις, and the military, in which are found the Ἀμυνομένη, "Warding Off", and the Ἐπιτηδῶσα, "Assaulting". The demes Pallene and Kolias were never among the famous ones of the city, so why should they have been used as ships' names while Marathon, for example, was not? An analogous situation exists with the name Ναύκρατις. She is the "Ship Conqueror", like the similarly named Ναυκρατοῦσα, "the Conquering Ships", rather than the Greek trading city in Egypt, a place not especially important to the Athenians in the 4th century. The Νεμεάς, likewise, was not named for the site of the Panhellenic games but for the literal meaning of the name, "Wooded", comparable to other ships with names of plants and growth, such as the Θάλλουσα, Φυλλίς, and Ἰδαία, respectively the "Growing", "Foliage", and "Wooden". Names referring to the main material of these wooden ships were far more appropriate than allusions to toponyms of no importance to the Athenians at the time. Similarly, the names Δῆλος and Δηλιάς were chosen for the literal meanings "visible" or "manifest", as from the adjective δῆλος, and were not references to the island of Delos. They belong to the

³⁸ Plutarch, *Mor.* 1057E.

³⁹ Εὐπλοία: *IG* II² 1606, line 86; 1612, line 202; 1632, line 296. Πρόνοια: *IG* II² 1609, line 59; 1611, lines 195, 207; 1617, line 38; 1631, lines 454, 579; I 2012c, line 76. Σφζουσα, *IG* II² 1609, line 83; 1631, lines 38–39; 1632, line 20.

⁴⁰ The names Ἀμφιτρίτη and Ὠρεΐθουα are both attested for sea nymphs, so that the meaning of the ships' names is "Sea Nymph", hence "Daughter of the Sea". For Ἀμφιτρίτη as a sea nymph, see Hesiod, *Th.* 243; for Ὠρεΐθουα, see *Iliad* 18.49.

⁴¹ *Contra*: Schmidt 1931, pp. 82–87.

⁴² Chantraine 1970, s.v. Εἰλεΐθουα.

⁴³ From κωλύω, "hinder".

category of names of light, brightness, and clarity, which includes such ships as the Φανερά, Λαμπερία, and Λαμπρά, the “Visible”, “Shining One”, and “Brilliant”, respectively. Several exceptions may be noted to the rule that the ships’ names were chosen for their literal meanings, most prominently the Σουνιάς and the Σαλαμινία. These names are a very few out of the approximately 300 now attested and do not negate the general validity of the rule: the names of the ships in the Athenian navy were normally abstractions and not named for known toponyms or for historical or mythical individuals.

The Ἔως listed here as second class was also listed in *IG II²* 1612, lines 302ff. in connection with the debt of the trierarchs Philinos and Demosthenes. She was also listed in I 7450, lines 49ff. (p. 216 below) with the trierarchs Διο[–] and Habronides Κο[–].

Lines 5–7: The names of four ships once occupied these lines, the last of which was lacking three thalamian oars, abbreviated θαλα. None of the names restored here is attested elsewhere.

Line 8: This line indicates the total number of τάρροι. Based on the total number given here and using lines 1–7 to provided an average of eleven ships per seven lines, we should restore at least forty-six lines of ships’ names preceding line 1 and six lines for the heading; compare lines 10–15.

Lines 9–14: These lines give the introduction for the next item in the inventory, the πηδάλια, or steering oars; for this introductory formula, see *IG II²* 1611, lines 142ff., 173ff., 197ff., 210ff., 230ff. This formula indicates how many πηδάλια the epimeletai took over from their predecessors, while the following lines, not preserved, indicated on which ship these πηδάλια were located. As line 15 makes clear, the ships were listed by class.

Of the “wooden equipment”, which included such items as oars, masts, and sail yards, the most important pieces were without question the πηδάλια, without which the ship could not easily be steered.⁴⁴ The inventory for the year 358/7 emphasizes the importance of the πηδάλια, which were already assigned to the Βοήθεια at the time, although the ship herself was unfinished at the beginning of the year 357/6.⁴⁵ Each ship had a pair of πηδάλια, which were attached at the stern, one on each side of the ship. They could be lifted out of the water when they were not needed, when, for example, the ship was tied up at a dock or when she was being beached.⁴⁶ In some cases, the inventories indicate that there were two πηδάλια on each ship, while in other cases the number of πηδάλια is not given; since, however, the word is in the plural, a ship must have had two.⁴⁷ That each ship had two πηδάλια is further made clear by the totals of equipment, which state the number of πηδάλια and the number of

⁴⁴ Morrison and Williams 1968, pp. 199, 291–292; Casson 1971, pp. 224–228; Morrison and Coates 1986, pp. 174–176.

⁴⁵ I 2012c, line 51 (p. 197 below); *IG II²* 1611, lines 127–133.

⁴⁶ Ancient warships, regardless of type, were beached sternfirst so that the ram would not be driven into the sand, from which it would be extremely difficult to launch the ship, especially when speed was important. If the πηδάλια were not raised, they also would be driven into the beach, making it difficult to launch the ship. In this situation, the πηδάλια would probably have been broken, making it impossible to steer the ship once she had got off the shore. The πηδάλια are shown raised on beached ships in art: Morrison and Williams 1968, Clas. 2, pl. 26:a; Morrison and Coates 1986, figs. 27, 41.

⁴⁷ Examples of two πηδάλια on each ship: I 2012c, lines 32–57 (pp. 194–195 below); *IG II²* 1607, lines 128–129 and 1613, lines 21ff. Contrast, for example, *IG II²* 1604, lines 13, 85 and 1611, lines 375, 441, where the number is not specified.

ships on which they were installed. *IG II² 1611*, for example, lists a total of 468 *πηδάλια* on 234 ships with one left over.⁴⁸

By the 330's, however, the term *πηδάλια* seems to indicate not one but a pair; *IG II² 1628* lists 257 *πηδάλια* and one *πηδάλιον*.⁴⁹ In the inventory for 325/4, the *epimeletai* of the *neoria* received 254 *πηδάλια* and one *πηδάλιον*, while they handed over 245 *πηδάλια* and one *πηδάλιον* to their successors.⁵⁰ In these two passages, the contrast between the singular and the plural is distinctly marked. That the *πηδάλια* cannot refer to individual steering oars is clear from the figures in *IG II² 1628*. If *πηδάλια* were individual items, why is the total an odd number with one left over and not an even number with none left over? The same problem occurs in *IG II² 1629* in the section describing the number of *πηδάλια* that were handed over to the incoming officials. The only explanation is that by this period the word *πηδάλια* in the plural had come to refer to a set, while the singular had come to mean one individual steering oar. The corollary to this observation is that when the item *πηδάλια* is listed among the equipment owed, it must refer to a pair.⁵¹

Line 15: For this heading, cf. *IG II² 1611*, lines 147, 202, 215 and 1613, lines 42, 69.

Lines 16–32: These ships are in a section recording the *ταρρός*, some of which are not complete as they lack certain types of oars. These ships should be in a different harbor from the ships listed in Col. I. *IG II² 1611* also lists the ships according to harbor. The formula used is the same as that described above in lines 1–7. The ships of lines 16–18 must all be *τῶν πρώτων* since they are followed by the heading *τῶν δευτέρων*; cf. I 2012c, lines 24–30, 58–81 (p. 191 below).

Line 16: The *Ἰπποθωντίς* is listed as first class both here and in *IG II² 1611*, lines 71, 150. Originally built by *Θεοφ[–ος]*, she was repaired in 356/5 by the builder *Dionysios*, and the repairs were paid for by the trierarch *Ἀριστοκ[–]*; *IG II² 1612*, lines 159ff., 256ff.

Line 17: This *Ῥώμη* was listed as first class here and in *IG II² 1611*, line 71. This *Ἰκανή* was likewise listed as first class here and in *IG II² 1611*, line 72.

Line 18: The *Πανδία* was listed as first class here, in 358/7. In 357/6, the trierarch *Archestratos*, son of *Kriton* of *Alopeke*, owed equipment from this vessel to the naval yard and did not pay the debt until the year of *IG II² 1622*; see *IG II² 1611*, lines 406ff. and 1612, lines 257ff.

Line 19: For this heading, see *IG II² 1611*, lines 73, 151, 193, 205, 222, 432; 1612, lines 4, 11, 22, 30; 1613, line 70. The ships following this heading are all second class.

Line 20: This ship *Τροπαία* was also listed as second class in 357/6; see *IG II² 1611*, lines 74, 152.

Line 22: This *Ἀποτομάς* was listed as second class here, as well as in the years 357/6 and 356/5: *IG II² 1611*, line 74 and 1612, lines 118ff.⁵² In 357/6, the trierarch *Moschos*

⁴⁸ *IG II² 1611*, lines 23–27.

⁴⁹ *IG II² 1628*, line 172.

⁵⁰ *IG II² 1629*, lines 294–300.

⁵¹ As, for example, *IG II² 1628*, line 532 and 1632, lines 8, 16, 54.

⁵² As Schmidt observes, this ship cannot be the same as the one listed in *IG II² 1605*, line 10 and 1608, line 64, because the earliest known construction date for a ship by the builder *Lysikles* is in the 350's; see Schmidt 1931, p. 16.

of Angele owed equipment from her; *IG II*² 1611, lines 418ff.⁵³ She was constructed by the builder Lysikles, and the trierarchs of 356/5, Daïppos of Marathon and Pronapides of Kollytos, were forced to repair her in that year: *IG II*² 1612, lines 118ff.

Line 23: For the abbreviation θαλα, see commentary on line 7, p. 185 above.

Line 24: This line may have held the name of only one ship, which had a complete set of oars. This situation is also true for line 27. This Εὔνοια is one of three ships with this name listed in 358/7; for the other two, see I 2012*c*, lines 39, 42 (p. 191 below). This ship was listed as second class here and in *IG II*² 1611, line 75. She seems still to have been second class in 356/5, when the trierarchs Timotheos of Anaphlystos and Aristomedes of Azenia owed equipment; see *IG II*² 1612, lines 288ff.⁵⁴

Line 25: The ship Πανθήρα was listed as second class here and in 357/6; see *IG II*² 1611, line 75.

Line 27: The Βοήθεια was listed as second class here and in 357/6; see *IG II*² 1611, line 76.

Line 28: The Μεγίστη was listed as second class in 357/6 and 356/5 as well as in 358/7; see I 2012*c*, line 70 (p. 191 below); *IG II*² 1611, lines 76, 152 and 1612, line 31. She was also listed in *IG II*² 1616 as built by Epicharides and under the control of the symmory headed by Kekropidon of Koile: *IG II*² 1616, lines 50ff.

Line 30: Both the Ἀχοή and the Ἴπποκάμπη were also listed as second class in 357/6 and 356/5: *IG II*² 1611, line 78 and 1612, lines 23, 36.

Line 31: The Ἀλκυών was listed as second class here in 358/7 and in 357/6: *IG II*² 1611, line 79.

I 2012*c*

This fragment of a naval inventory was found in a modern house wall on November 3, 1937, in section AA. The fragment of Hymettian marble is broken above and to the right, preserving three columns of nonstoichedon text (Pl. 42). The left side of the stele is preserved and has anathyrosis; the cutting on the bottom may be original. The front is worn, as is the back, from reuse of the stele as a threshold. The stone was reused twice: first as a threshold and then as part of the modern wall in which it was found. During the first reuse, a pivot hole was cut and the back was cut down, leaving a band *ca.* 0.10 m. wide along the edge as a doorstep. At this time, the bottom may have been cut to its present shape. This section of the inscription is composed of two joining pieces. Two of the lines, 12 and 48, have larger letters than the rest and the letters are fairly well cut and spaced. The fragment comes from the front of the inscription and is from the same document as I 2012*a*, *b* and I 3227. Previously published: Schweigert 1939, no. 5, fragment B.

P.H. 0.276 m.; p.W. 0.269 m.; Th. 0.077–0.106 m. L.H. 0.005 m.

⁵³ For the restoration of this man's name, see Davies 1971, p. 395.

⁵⁴ The ship in *IG II*² 1612, line 290 seems to be second class because the two ships which precede her, the Εὐτυχία and Νίκη, in lines 279–280, are known to have been second class and are listed as such in *IG II*² 1611, lines 81, 84 and 1612, line 32.

a. 358/7 a.

NON-ΣΤΟΙΧ.

Col. I	Col. II	Col. III
[Κεραῖαι Μεγάλαι·] [ταῖσδε τῶν νεῶν τού-] [των ἐν τοῖς νεωσοῖκ-] [οῖς κεραίας μεγάλας]		
5 [παρακειμέννας] [κατελάβομεν·] [τῶν πρώτων·] <i>vacat</i> [----] II, [---]ει II, [----] II, [---]άδι II,	[30 lines ships' names] Αἰγλη II, [-----] II, Ἐϋγ[ο]μίαι II, [-----] II, Ὀ[ρθ]οπόλει[II, [-----]]ι II,	[-----]νη[ν [-----]] Κρα[τίστην, [-----]] 60 Σάλ[πιγγα, [-----]] Ἀγαθήν, [-----] Ἐρωμ[ένην, [-----].] τῶν δ[ευτ]έ[ρων·]
10 [τῶν δευτέρων] <i>vacat</i> [----] II, Νικηφ[ό]ρωι II, [----] II, [---]ηι II, [----] II, Φιλο[ν]ίχει II, [----] II, [---]ι II, [----] II, [---]ει II·	35 Εὐχάρι[δι II, Νυκ]ησῶι II, Γενναῖαι II, Ἐριδι II, Μακ[α]ρίαι II, Ἡ[π]ιόνηι II, Σφε[ν]δόνηι II, Ἀρί[σ]τηι II, Εὐ[ν]οῖαι II, Ἡβηι II,	65 [-----]ε[-----] Δορκ[άδα, [-----]] Ἐϋπ[ο]ρίαν, [-----] Συγ[ω]ρίδα, [-----] Δ[ελφ]ίγλαν, [-----]
15 [ἀριθμὸς] <i>vacat</i> [κεραιῶν] μ[εγάλων] ΔΔΓIII. [Ἴστο]ι Ἀχ[άτ]ειοι·	40 Ἐ[ρ]ωμένηι II, Εὐφραινόσει II, Πανδήμωι II, Πρόκνηι II, Ἀγύσει II, Εὐνόαι II, Σαλαμινίαι II, Παγκρα[τί]ωι II, Πανταρίστηι II, Σα[λ]αμινίαι II,	70 Ἰκανήν, Μεγί[σ]την, Ἐλ[ε]υσίνα, Αἰαν[τε]αν, Ἡγεμονίαν, Φυλ[λ]ίδα, Φήμην, Σουινιά[δα], Εὐρώπην, Νίκην, 75 Φιλονίκην, Σωιζο[μένην], Πρόνοιαν, Ἀργυρ[ᾶν], Σειρήνα· <i>vacat</i> τῶν τρίτων· Νίκην, Ἀσκληπιά[δα], 80 Παγκράτιον, Πανθ[ή]ραν, Τρί[αινα]ν· <i>vacat</i> ἀριθμὸς τρ[ι]ήρων <i>vacat</i>
[ταῖσ]δε τῶν [νεῶν] 20 [τούτ]ων ἐν [τοῖς] [νε]ωσοῖκοις [ισ]τὸς [ἀκ]ατελους πα[ρ]ακει- [μέ]γους κατε[λ]άβο- [μεν·] τῶν πρ[ώ]των·	45 Ἀρεῖαι II, Κωλιάδι II, Θέτιδι II, Ψαμάθῃι II, Φῶι II, Ἐριδι II, Πολυαρῖσται II, Οἰστῶι II, Πετηνῇι II, Εὐτυχεῖ II,	
25 [Ἀγρε]ύ[ο]υσαι I, Ἡγεμόν]ει I, [Προθ]υμίαι I, Ἀ[νθυπα]σίαι I, [Γοργοφ]όνοι I, [---] I, [Αἰαντ]εῖαι I, Νε[μεάδ]ι I·	50 Κυθηραῖαι II, Πανηγύριδι II, Βοηθείαι II· <i>vacat</i> ἀριθμὸς πηδαλίων ΗΨΔΔΔΔΓIII. Κλιμακίδες·	
[τῶν] δευτέρων· 30 [Νέαι] I· ^ω ἀριθμὸς [ιστῶν ἀ]χαιεῖ ΓII[II.]	55 [τ]α[τ]ῖσδε τῶν νεῶν τού- των ἐν τοῖς νεωσοῖκο- [ις κλ]ιμακίδας <i>vacat</i>	

Epigraphical Commentary

Lines 1–6: These lines, introducing the next section, are restored on the basis of lines 18–24, 54–57, of I 3227, lines 9–15 (p. 184 above) and I 2012a, lines 4–12 (p. 200 below), and of the contents of lines 7–17 (see below).

Lines 7–17: If this section followed the pattern of the rest of this fragment, we would expect that each line contained two ships' names; cf. lines 35–50. A single ship's name in this inscription occurs either in the last line of each class of ships in that section or when the ship has a special notation; for the former, see lines 30, 51, 77, 81; for the latter, see I 3227, lines 2, 20, 22, 25, 28, 31 (p. 184 above). We would, therefore, expect the total number of κεραῖαι μεγάλαι to be at least thirty-six, with two per ship, while the actual number preserved is twenty-eight; see the note on line 17, p. 192 below. The following solution accounts for all the evidence preserved on the stone: line 7 contained the class of the ships in lines 8–9; lines 8–9 and 11–15 each had two ships' names, and each ship had two κεραῖαι μεγάλαι, making a total of twenty-eight pieces of equipment; line 10 contained the class of the vessels in lines 11–15; see lines 24–31. Line 10 should be restored as τῶν δευτέρων because the third-class ships are usually not mentioned in this context. This restoration makes the ships in lines 8–9 first class, and thus line 7 is restored as τῶν πρώτων; for just these two classes in an entry,

see lines 18–31. Line 16 contained only one word, not because the number was omitted but because the mason decided to put both words of the equipment on the following line along with the total; see lines 30–31, 52–53.

Line 11: The name of this ship could possibly be restored as Φωσφόρος. The Νυκηφόρος is better attested during the 350's; Νυκηφόρος: *IG* II² 1613, line 55; Φωσφόρος: *IG* II² 1612, lines 107, 334. She is also known from *IG* II² 1613, line 55, to have been a second-class ship.

Line 13: Schweigert restored the name Πολυνίκη here. This ship's name, however, is known only in the first class, in *IG* II² 1611, line 286, and the ship here in line 13 is second class. It seems to me better to restore either Πολεμονίκη or Φιλόνίκη, both of which are attested as second-class vessels, here in *I* 2012c, line 75, and *IG* II² 1611, lines 85, 433. The Ἀξιόνίκη is not a possible restoration because she is only known as a third-class ship; see *IG* II² 1611, line 99. Since the Φιλόνίκη is mentioned in this inscription (line 75) in a context which ought to include all the ships listed in the first two columns, I have restored that name here.

Line 17: Schweigert read the number here as ΔΓΙΙ, but a third Ι is clearly visible. Close inspection of the stone also shows the right diagonal, top corner, and lower right corner of a second delta to the left of the one seen by Schweigert. This number does not leave very much room for the word μεγάλων, but no other word is possible in this space and context.

Line 18: The letters in this line are cut larger than those on the rest of the fragment: L.H. 0.007 m.

Lines 25–28: Each line appears to contain two ships' names, and each ship seems to have carried one piece of equipment. The only attested ship's name that has a letter combination ΤΟ is the Ἀγρεύουσα, hence the restoration of the first name in line 25. Of the possible combinations for the second name, only the Ἡγεμόνη fills the space properly. In line 27, the combination ΟΝΟ is attested only in the name Διάκονος, restored by Schmidt in *IG* II² 1611, line 118,⁵⁵ but this name will not fit here because it is two letters too short. The likeliest new name that will fit here is Γοργοφόνος; two other names with the word Γοργο- are known: the Γοργοφόνη in *IG* I³ 498, line 23, and the Γοργῶπις, listed in *IG* II² 1611, line 81. It is not possible to restore the second name in this line. In line 28, the first ship must be the Αλαντελα because, of the possible choices, only this one fits here. The second ship in that line can only be the Νεμεάς because, of the four known ships' names which begin ΝΕ,⁵⁶ only this name fits the space and might have been first class. It is probably the same ship as the one listed in *IG* II² 1612, lines 167ff. [-]υρ[-]ει ΙΙ[Προθ]υμλαι Ι Ἀ[νθυπα]σλαι ΙΙ[-] ΙΙ οΙ [-] ΙΙ[-]ειαι Ι Νε[-ι] Ι Schweigert.

Line 30: Of the three possible names, Δλα, Ἐννη, or Νέα, only Νέα fits the space properly, while the other two are a little short. The Νέα was listed in 357/6 when Demophanes of Alopeke owed equipment: *IG* II² 1611, lines 438ff. This debt was recorded as paid by Themistokles of Phrearrhioi in the inventory *IG* II² 1622, lines 338ff. [-] Ι Ἀριθμός Schweigert.

Line 31: Since there are nine vessels, each carrying one piece of equipment, the total number needs to be restored here as nine and not eight as in the previous publication.

Line 43: After Schweigert, the Παγκράτιον has been restored here on the basis of line 80. The ships restored in the Corpus as Παγκράτεια should presumably be restored as Παγκράτιον.⁵⁷

Line 54: The letters in this line are cut larger than those on the rest of the fragment: L.H. 0.007 m.

Line 68: This ship's name is probably the Συνωρς rather than the Σύνταξις, the only two names which fit the remaining letters on the stone. Both ships are attested in the 350's, the Σύνταξις in *IG* II² 1613, line 171, and the Συνωρς in *IG* II² 1611, line 83, and 1612, lines 13,⁵⁸ 171. Of these two ships, only the Συνωρς is known to have been second class and hence is a more likely restoration. This line was indented by the mason because he ran out of room when cutting line 44 in Col. II and ran the line into Col. III, forcing the line in Col. III also to be shifted to the right.

Line 71: I have restored the second ship's name as Αλαγ[τελαν], rather than following Schweigert's restoration Αλαγ[τα], because the attested name is Αλαντελα not Αλας; see *IG* II² 1618, line 97; 1624, line 75; 1630, lines 8–9.

⁵⁵ Schmidt 1931, p. 40.

⁵⁶ The ships Νέα, Νεᾶνις, Νεμεάς, and Νεωτάτη.

⁵⁷ *IG* I³ 500, line 6; *IG* II² 1612, line 294. Schweigert 1939, p. 25.

⁵⁸ For the restoration here, see Schmidt 1931, p. 41.

Line 75: Since only the first five letters of the second ship's name are preserved, it is impossible to tell epigraphically whether her name was Σωιζομένη or Σωιζουσα. The Σωιζουσα was listed in *IG II²* 1609, line 83 and then not mentioned again until *IG II²* 1631, line 39 and 1632, line 20. The Σωιζομένη was mentioned only in *IG II²* 1611, line 378, which dates to the year after this fragment. Thus it seems better to restore the name Σωιζομένη here.⁵⁹

Lines 78–79: These two lines are both aligned with the larger line 54 in Col. II.

Line 82: The line is aligned with line 31 of Col. I and line 57 of Col. II.

Lines 1–6: For the introduction to the ships in lines 7–15, see *IG II²* 1611, lines 142–147, 173–177, 197–202, 209–215, 229–234.

Lines 7–17: These lines listed first ships carrying *κεραῖαι μεγάλοι* and then the total number of *κεραῖαι μεγάλοι* that the epimeletai counted.

One source of power for a trieres was the oars, while the other means of moving the ship was the sail. The items of “wooden equipment” involved were the *ιστός*, or mast, and the *κεραῖαι*, or sail yards;⁶⁰ the sail itself was included with the ropes, awnings, and screens among the “hanging equipment”. The mast, set in the center of the boat in a socket, was removed before battle and left ashore (see p. 206 below). The top of the sail was attached to the *κεραῖαι*, which were used to raise and lower the sail and to keep it in place when it was in use. The *κεραῖαι* were in fact two pieces of wood lashed together to form one complete sail yard; in the inventory for the year 356/5, the total number of *κεραῖαι* is 462, which were on 231 ships.⁶¹ The inventories, therefore, regularly list the *κεραῖαι* in the plural but do not specify how many are on an individual ship;⁶² as with the *πηδάλια*, the plural must mean two, and the singular must mean one. In some periods, there is a second, smaller mast and accompanying *κεραῖαι*, which are called *ιστός ἀκάτειος* and *κεραῖαι ἀκάτειοι* in the inventories.

Line 10: This line gave the class of the ships in lines 11–15. Probably it read *τῶν δευτέρων*, as restored here; see *IG II²* 1611, lines 73, 151, 193, 205, 222, 432; 1612, lines 4, 11, 22, 30; 1613, line 70.

Line 11: The ship *Νυκηφόρος* was also listed as second class in 353/2, when she was assigned to Mounychia harbor. She was built by Theodoros and, in 353/2, had neither a ram nor equipment and needed repair: *IG II²* 1613, lines 55ff.⁶³

Line 13: This *Φιλονίκη* was listed here as second class, in line 75, and in 357/6: *IG II²* 1611, lines 433ff. In the same year, a trierarch from Acharnai owed equipment from her: *IG II²* 1611, lines 433ff. Chares of Angele owed equipment in the year of I 7450, lines 26ff. (p. 216 below).

⁵⁹ Cf. Schweigert 1939, p. 20.

⁶⁰ Mast: Morrison and Williams 1968, pp. 199, 293; Casson 1971, pp. 229–235; Morrison and Coates 1986, pp. 176–177. *κεραῖαι*: Morrison and Williams 1968, p. 294; Casson 1971, pp. 229–235; Morrison and Coates 1986, pp. 176–177.

⁶¹ *IG II²* 1612, lines 49–51. These are the regular or larger *κεραῖαι*. The smaller *κεραῖαι* are listed at lines 54–57; there were 167 *κεραῖαι ἀκάτειοι*, or “boat” sail yards, on 83 ships and one extra *κεραῖα*.

⁶² As, for example, *IG II²* 1611, lines 377, 428, 481; 1612, lines 328, 329, 336; 1613, line 218.

⁶³ In 353/2 she must have been second class and assigned to Mounychia because her entry is followed by the heading for the third-class ships in Mounychia. After that heading are the entries for those ships. The *Νυκηφόρος* cannot be a first-class ship because the heading for those ships is in the preceding column.

Line 18: This line provides the heading for lines 19–31. This formula indicates how many ἱστοὶ ἀκάτειοι the epimeletai took over from their predecessors, while the following lines, not completely preserved, indicated on which ships these ἱστοὶ ἀκάτειοι were located. As is clear from lines 24 and 29, these ships were listed by class.

Line 19: For this introductory formula, see *IG II*² 1611, lines 142–147, 173–177, 197–202, 209–215, 229–234.

Line 24: For this heading, see *IG II*² 1611, lines 147, 202, 215 and 1613, lines 42, 69.

Lines 25–28: Each of these lines should be restored as containing two ships' names, and each vessel had one piece of equipment.

Line 25: The Ἀγρεύουσα, listed here as second class, was also listed in *IG II*² 1622, lines 623ff., where the trierarchs Gorgias of Sounion, Kallias of Erchia, Aristokrates of Lamptrai, Pythodoros of Kytheros, Euthoinos of Pallene, Timotheos of Anaphlystos, and Phrynaios of Athmonos are recorded as paying off a debt for equipment. The Ἡγεμόνη restored here must be one of the two ships of this name found in *IG II*² 1612, lines 111 and 122, but it is not clear which she is. The trierarchs of both ships were forced to repair them in 356/5.

Line 26: The Προθυμία is listed as first class here in 358/7. She also seems to have been first class in 357/6, when the trierarch [. . . ω]ν Ἀχαρνεύς owed equipment; *IG II*² 1611, lines 423ff. The Ἀνθηπασία was listed as first class here in 358/7. In 356/5, the trierarchs Dionysios of Kolonai and Melasandros of Angele were forced to repair her: *IG II*² 1612, lines 115ff. In the same year, the trierarch Stratokles of Diomeia owed equipment from a previous trierarchy: *IG II*² 1612, lines 320ff.

Line 27: The Γοργοφόνος is restored here and not otherwise attested; for similar names, see the epigraphical commentary above. The substitution of -οι for -ωι as the dative singular ending for second declension nouns is rare but possible ca. 350 B.C., and Threatte lists eight certain and two doubtful examples.⁶⁴ The spacing on the stone requires this ending here.

Line 28: The first class Αἰώντια recorded here is not otherwise known. The Νεμεάς listed here is also listed in *IG II*² 1612, lines 167ff., in the year 356/5, when she was repaired by the builder Charidemos. From the context of that entry, the ship appears to have been first class at the time.

Line 29: For this heading, see *IG II*² 1611, lines 73, 151, 193, 205, 222, 432; 1612, lines 4, 11, 22, 30; 1613, line 70.

Lines 30–31: The Νέα was entered in *IG II*² 1611, lines 438ff., with equipment owed by Demophanes of Alopeke. His debt was paid by Themistokles of Phrearrhioi in the year of *IG II*² 1622; see *IG II*² 1622, line 338. The total of the equipment involved in this section is given here.

Lines 32–51: These ships are all carrying πηδάλια; cf. line 52. The ships are all ἐξαίρετοι. Of the thirty-six ships listed here, twenty-five are known to have been ἐξαίρετοι. Of the remaining eleven names, three, Πάνδημος, Παγκράτιον, and Ἔρις, represent ships' names not preserved elsewhere in the inventories; three, Εὐφραίνουσα, Ὀρθόπολις, and Ἀρίστη, represent ships not previously known to exist at this period; three, Ἡβη, Ἀνυσίς, and Θέτις, represent ships of unknown class; one, Μακαρία, represents a ship known only as

⁶⁴ Threatte 1980, pp. 335–336.

second class; and one, Ἐρωμένη, is known only as a first-class ship. Many of these ships are also recorded in the following year under the heading of ἐξάιρετοι; cf. *IG II²* 1611, lines 122–128, 157–170.

Lines 32–33: These lines originally had two ships' names each; cf. lines 35–50. The Αἴγλη was listed as ἐξάιρετος in 358/7 and in 357/6: *IG II²* 1611, line 187. The Εὐνομία was also registered as ἐξάιρετος in 356/5 and thus was in the same class in 357/6, although her name is not preserved in the extant fragments for that year: *IG II²* 1612, line 44.

Line 34: This Ὀρθόπολις is inventoried only here. Another ship, a tetreres, with the same name is entered in *IG II²* 1631, line 646.

Line 35: The Εὐχαρίς was built in 362/1 as an ἐξάιρετος ship and was still listed in that class in 357/6; see *IG II²* 1611, lines 112, 158, 189. The Νύκησώ was also included in this class in 357/6: *IG II²* 1611, line 158.

Line 36: The Γεναία was classified as ἐξάιρετος in 357/6: *IG II²* 1611, line 187. The name Ἔρις, "strife or contention", is a previously unattested ship's name. For a similar name, compare the Ἀμιλλὰ, "conflict".

Line 37: The only other Μακαρία known from this period is a second-class ship; see *IG II²* 1611, lines 194, 206, 226. The Ἡπιόνη was also registered as ἐξάιρετος in 357/6; see *IG II²* 1611, line 159. Menestheus of Rhamnous is listed as owing a debt in connection with this ship: *IG II²* 1622, lines 721ff.⁶⁵

Line 38: The Σφενδόνη was built in 358/7 as an ἐξάιρετος ship and was still in that class in 357/6: *IG II²* 1611, lines 125, 160. This Ἀρίστη is listed only here.

Line 39: This Εὐνοία is listed only here and is different from the one in line 42; see note on line 42 below. The Ἡβη was constructed in 361/0 by the builder Amyntas (*IG II²* 1617, lines 134ff.) and was recorded here as an ἐξάιρετος vessel in 358/7. Under the command of the trierarchs Polykles of Anagyrous and Hegias of Marathon, she was included among ships sent out in 357/6: *IG II²* 1611, lines 370ff.⁶⁶ She was listed as πρώτη in the year of *IG II²* 1617, when she was at least nine years old: *IG II²* 1617, lines 134ff.⁶⁷ Hegias still owed a debt incurred as trierarch on this ship in *IG II²* 1622, lines 239ff., where it was partially paid by Philokrates of Poros.

Line 40: The Ἐρωμένη of this class is not otherwise attested, but a first-class ship of this name is known from this period (see comment on lines 58–62 below): *IG II²* 1611, lines 220, 237. The dative form Εὐφραινόσει is the alternative form for Εὐφραινούσηι. It is rare by the 350's to have omicron for omicron-upsilon, but this spelling still occurs, especially in inventories.⁶⁸ Another and later Εὐφραίνουσα is known; see *IG II²* 1623, line 202 and

⁶⁵ See also Davies 1971, pp. 250–251.

⁶⁶ The builder's name was restored by Schmidt in *IG II²* 1611, line 370; see Schmidt 1931, p. 30.

⁶⁷ Although at first glance *IG II²* 1617, lines 125–153 appear to indicate that the first three ships listed there are ἐξάιρετοι, a close examination reveals that they must be first class, because in the year of the inventory they were at least nine years old. No other ships of the best class of this age are known. The fourth ship in the list, the Ἀχάλλεια, is certainly first class. The Πετομένη also seems to be a first-class ship because she is listed in *IG II²* 1613 with other first-class ships. As Schmidt saw, a better restoration for the builder's name is Λυ[συκλείδου], which fits the space; see Schmidt 1931, p. 37. Thus all the ships in *IG II²* 1617, lines 125–153 should be first class. Their names might be restored in *IG II²* 1611, lines 113a–b, where the names of four ships built in 361/0 should be restored.

⁶⁸ Threatte 1980, pp. 243–255, 351–352.

1631, line 434. This ship would have been very old if she were the same vessel as that listed here in line 40; hence these ships should be different.

Line 41: The name Πάνδημος is a previously unattested ship's name. The Πρόκνη was listed as ἐξάιρετος in both 358/7 and 357/6: *IG II²* 1611, line 161.

Line 42: The Ἄνουσις is recorded here as ἐξάιρετος. Debts were owed from previous trierarchies on this ship in 357/6 by Nausikrates of Oinoe (*IG II²* 1611, lines 385ff.), in 356/5 by Kritodemos of Alopeke and Pheidippos, whose deme is not preserved (*IG II²* 1612, lines 311ff.), and in the year of I 7450 by Philinos of Lakiadai (I 7450, lines 20ff.; see p. 216 below). This Εὔνοια must be a different ship from the one inventoried in line 39. She was also entered as ἐξάιρετος in 357/6 in *IG II²* 1611, line 162.⁶⁹

Lines 43–44: Two ships called Σαλαμινία were not only in commission together but in the same class. The Σαλαμινία of line 43 is listed only here. This Παγκράτιον is known only from this instance. The Πανταρίστη was described as ἐξάιρετος in both 358/7 and 357/6; see *IG II²* 1611, line 164. The Σαλαμινία of line 44 was also recorded as ἐξάιρετος in 357/6 and 356/5; see *IG II²* 1611, line 164 and 1612, line 40. That these references are all to the vessel in line 44 is clear from the order in which the names are given in *IG II²* 1611 and 1612: *IG II²* 1611, line 164 lists the Πανταρίστη next before the Σαλαμινία, while *IG II²* 1611, line 165 and 1612, line 40 both list the Ἀρεία after the Σαλαμινία. An examination of lines 41–46 of this inscription shows that the order fits only the Σαλαμινία of line 44.

Line 45: The Ἀρεία was built in 359/8 as an ἐξάιρετος ship and remained in that class in 358/7, 357/6, and 356/5; see *IG II²* 1611, lines 120, 135, 165 and 1612, line 42. The Κωλιάς was described as ἐξάιρετος here and in *IG II²* 1611, line 135, in the year 357/6.

Line 46: The ship Θέτις is recorded only here and at *IG II²* 1622, line 169, where a trierarch owes equipment from this ship. It is not clear whether these two entries refer to the same ship. The Ψαμάθη was built in 358/7 as an ἐξάιρετος ship and remained in that class in 357/6, according to *IG II²* 1611, lines 122, 136, 166.

Lines 47–51: These ships are all known from *IG II²* 1611, lines 121–129 to be ἐξάιρετοι built in the year 358/7, hence their position at the end of the list of ships of this class.

Line 47: The Φῶς and the Εἴρις were both built in 358/7 as ἐξάιρετοι ships and were still registered in the same class in 357/6 when they were one year old; see *IG II²* 1611, lines 122, 123, 136, 137, 166.

Line 48: The Πολυαρίστη and the Οἰστός were both built as ἐξάιρετοι ships in 358/7 and were still in that class in 357/6, according to *IG II²* 1611, lines 123, 124, 137, 138, 167.

Line 49: Both the Πετηνή and the Εὐτύχης were built as ἐξάιρετοι ships in 358/7 and were still part of that class in 357/6; see *IG II²* 1611, lines 124, 125, 138, 139, 168. In 353/2, the Εὐτύχης was inventoried again in *IG II²* 1613, lines 189ff. because the trierarchs Philippides and Demosthenes, both of Paiania, owed equipment from her. From this entry, we also learn that she was constructed by the builder Lysikleides.

⁶⁹ I have given this reference for the Εὔνοια of line 42 because the order of the list of ἐξάιρετοι ships in *IG II²* 1611, lines 160–164 runs Σφενδόνη II, Πρόκριδι II, Πετομένη II, Πρόκνη II, Εὔνοια II, Διώνη II, Πανδώρα II, Στρατονίκη II, Πανταρίστη II, Σαλαμινίαι II, etc. The Εὔνοια listed here is thus the second one listed in I 2012c at line 42.

Line 50: The *Κυθηρία* and the *Πανήγυρις* were both built in 358/7 as *ἐξάιρετοι* ships and were included in that class in the following year, 357/6, according to *IG II²* 1611, lines 126, 139, 140, 169.

Line 51: The *Βοήθεια* was under construction and not finished at the beginning of the year 357/6 and thus gives the date for this inventory; see *IG II²* 1611, lines 121–133. She has been assigned *πηδάλια* here because she was built in a shipyard not connected with the state one and needed the *πηδάλια* to get to her assigned harbor.

Lines 52–53: Since each ship normally carried two *πηδάλια*, the 198 recorded here should have been assigned to ninety-nine ships, of which the names of sixty have not been preserved. These vessels were listed two ships to a line in the thirty lines preceding line 32. If the ships were not all *ἐξάιρετοι*, several more lines would have been needed to give the classes.

Lines 54–57: These lines are occupied by the heading and introduction of the next category, the *κλιμακίδες*. The mason continued the entry at the top of the next column, Col. III. On the basis of other such introductions in this inventory, the missing section may be restored as *παρακειμένους κατελάβομεν τῶν πρώτων* at the top of Col. III.

Ladders, or *κλιμακίδες*, were also included in the “wooden equipment”.⁷⁰ The *κλιμακίδες* seem to have been lashed to the exterior of the stern and used to get on and off the ship. The examples in ancient art show only situations in which the ship is clearly beached on the shore; the *κλιμακίδες* were probably also used when the ship was tied up at a dock.⁷¹ Normally each ship had two *κλιμακίδες*. The inventory for 357/6, for example, records 465 *κλιμακίδες* as being on 232 vessels, with one extra ladder.⁷² In some cases, the number of ladders is actually specified, but in many others, *κλιμακίδες* is simply written thus in the plural, which stands for two.⁷³

Lines 58–62: These ships must all be *τῶν πρώτων* since they are followed by second- and third-class vessels; see also lines 24–30 on this stone. Each of these lines seems to have contained two ships' names. The standard formula for the lists of all the ships puts their names in the accusative as here; see also *IG II²* 1611, lines 65–134. The *Κρατίστη* given in line 59 as a first-class ship was also in that class in 357/6; see *IG II²* 1611, line 220. In that year, the trierarch Archestratos, son of Kriton of Alopeke, owed equipment from this ship

⁷⁰ Ladders: Morrison and Williams 1968, pp. 200, 292; Casson 1971, p. 251. Poles: Morrison and Williams 1968, pp. 200, 293; Casson 1971, p. 251. *παραστάται*: Morrison and Williams 1968, p. 293; Casson 1971, p. 237, note 50.

⁷¹ Ladders shown lashed to stern: Morrison and Williams 1968, Arch. 57, pl. 15:a, b; Arch. 85, pls. 19, 20:a. Beached ships with ladders: Morrison and Williams 1968, Clas. 2, pl. 26:a; Casson 1971, fig. 106; Morrison and Coates 1986, fig. 27.

⁷² *IG II²* 1611, lines 28–32. For some other examples, see *IG II²* 1605, lines 45–46; 1607, lines 119–120; 1608, line 47; 1613, lines 22, 35.

⁷³ As, for example, *IG II²* 1606, lines 38–39, 51–52; 1607, lines 5, 12, 13; 1611, lines 295, 317, 332, 347; 1614, line 17; 1627, lines 452, 461; 1628, lines 590–591, 598; 1631, lines 267, 272. Three entries are exceptions, using the dual form, *κλιμακίδε*, and also specifying two ladders: *IG II²* 1608, lines 47, 56; 1609, line 90. The dual is very rare in the inventories despite the large number of items issued in pairs. Other certain examples of the dual are *κοντώ*: 1609, line 90; *παραστάται*: 1607, lines 118, 129, 152; 1608, lines 34, 46; 1609, line 90. In all instances the number two also accompanies the item name in the dual. No examples of the dual in either the genitive or the dative are known.

(*IG II*² 1611, lines 408ff.).⁷⁴ This debt was not paid until the inventory *IG II*² 1622, where it is recorded in lines 260ff. The Σάλπιγξ entered in line 60 is also included among the first-class ships in 357/6; see *IG II*² 1611, lines 192, 219. This Ἀγαθή, a first-class ship, is mentioned only here, in line 61. The Ἐρωμένη listed in line 62 was also a first-class ship in 357/6 and 356/5; see *IG II*² 1611, lines 220, 237 and 1612, line 3. In 356/5, the trierarchs Antidoros of Phaleron and Aristolochos of Erchia owed equipment from this ship: *IG II*² 1612, lines 352ff.⁷⁵

Line 63: For this heading, see comment on line 29, p. 194 above.

Lines 64–76: Each of these lines recorded the names of two ships.

Line 66: The Δορκάς, listed here as second class, is probably the same ship as the one in *IG II*² 1609, lines 28 and 113. If she was built in 371 or 370, she would have been about thirteen years old in 358/7.

Line 67: The Εὐπορία was described as second class here, in 357/6 (*IG II*² 1611, line 207), and in the year of I 7450, lines 16ff., when equipment was owed by a trierarch whose name is not preserved.

Line 68: The Συνωρίς was inventoried as second class here, in 357/6 and in 356/5: *IG II*² 1611, line 83 and 1612, lines 13,⁷⁶ 171. Originally built by Xenophilos, she was repaired by Pamphilos in 356/5: *IG II*² 1612, lines 171–173.

Line 69: This ship, the Δελφινία, is mentioned only here. Another ship with the same name was listed in *IG II*² 1604, line 91. Although there she was inventoried as “new”, she would have been too old, about thirty years old, to be the same vessel as the one here.

Line 70: The second-class Ἰκανή is recorded here only. Another ship with this name is known to have been first class at this time; see I 3227, line 17 (p. 184 above). The Μεγίστη was entered as second class in 357/6 and 356/5 as well as in 358/7; see I 3227, line 28; *IG II*² 1611, lines 76, 152 and 1612, line 31. She was also described in *IG II*² 1616 as built by Epicharides and under the control of the symmory headed by Kekropidon of Koile: *IG II*² 1616, lines 50ff.

Line 71: The Ἐλευσίς was listed as second class here. In the year of I 7316, two trierarchs, whose names are not preserved, owed equipment from her: I 7316, lines 10ff. The Αἰαντεία mentioned here as second class is probably the same ship entered at *IG II*² 1618, lines 97ff. and built by Lysikles.⁷⁷ In the year of the inventory *IG II*² 1618, Chairestratos of Kephisia headed the symmory for this ship, and equipment was owed by men whose names are not preserved.

⁷⁴ This debt must be on the first class Κρατίστη and not the ἐξάρτεος one listed in *IG II*² 1611, line 165, because the Λαμπάς, listed in *IG II*² 1611, lines 66 and 404, is also first class. Since, in the 350's, ships on which equipment was owed are listed under the trierarch's name according to class, the Κρατίστη must also be first class; see I 7450, line 13; *IG II*² 1611, line 417.

⁷⁵ These trierarchs must have been on the first-class ship and not the ἐξάρτεος one mentioned in I 2012c, line 40, because all the ships whose equipment they owed were listed in *IG II*² 1611 as first class: Αὔρα, lines 192, 219; Πανάχεια, lines 191, 203, 217; Τριετηρίς, line 190; Χρυσή, lines 303, 217; see also note 74.

⁷⁶ For the restoration here, see Schmidt 1931, p. 41.

⁷⁷ In *IG II*² 1618, lines 97–116, the two ships inventoried are the Αἰαντεία and the Ἡγεμονία, in the same order as in I 2012c, lines 71–72. The Αἰαντεία is preceded in both cases by a ship called the Ἐλευσίς: *IG II*² 1618, lines 92–96 and I 2012c, line 71. Since the ship in *IG II*² 1618 has the notation ἡ παρὰ Διονυσίο, she is probably a different vessel from that in I 2012c, line 71.

Line 72: The Ἡγεμονία is inventoried here as second class. She is probably the same vessel as the one with the same name mentioned in *IG II²* 1618, line 110. The Φυλλίς, included here as second class, might be the same ship as that listed in *IG II²* 1612, line 100.

Line 73: This second-class Φήμη is catalogued here and probably in I 7316, line 4; see commentary below (pp. 210–211).⁷⁸ This Σουινιάς is entered only here.

Line 74: The Εὐρώπη was recorded as second class here, in 357/6 (*IG II²* 1611, line 83), and in 356/6 (*IG II²* 1612, line 24). She was listed as needing repair in the year of *IG II²* 1615, lines 88ff. In that year and in the year of *IG II²* 1616, several men are described as owing equipment. From the context, it is not clear whether they are former trierarchs or members of the symmory responsible for this ship. They are Sostratos of Acharnai, Strombichos of Euonymon, Dorotheos of Anagyrous, Stephanos of Myrrhinous, and Demonikos of Lakiadai; see *IG II²* 1615, lines 88ff. and 1616, lines 117ff. The Νίκη registered here as second class is one of the two second-class ships of that name entered in *IG II²* 1611, lines 81–82. One of these two ships was also second class in 356/5 (*IG II²* 1612, line 32), when the trierarch Diokles of Alopeke owed equipment from her (*IG II²* 1612, lines 279ff.).

Line 75: The Φιλονίκη is inventoried as second class here and in line 13. In 357/6, a trierarch from Acharnai owed equipment from her: *IG II²* 1611, lines 433ff. Chares of Angele owed equipment in the year of I 7450, lines 26ff. The Σωιζομένη is described as second class here. In 357/6, a trierarch whose name is not preserved owed equipment from her: *IG II²* 1611, lines 378ff.

Line 76: The Πρόνοια is also recorded as second class in 357/6: *IG II²* 1611, lines 195, 207. This Ἀργυρᾶ is entered here only. Another ship of this name was captured by Timotheos and is mentioned in *IG II²* 1607, line 142.

Line 77: This Σειρήν is described only in 358/7 here and in I 2012a, line 2 (p. 200 below).

Line 78: The third-class ships start here. For this heading, see *IG II²* 1611, line 97 and 1613, lines 61, 71.

Line 79: Both the Νίκη and the Ἀσκληπιάς are classified here as third-class ships and appear in no other inventory.

Line 80: Both the Παγκράτιον and the Πανθήρα are entered only here as third-class vessels.

Line 81: The Τρίαινα is listed only here as a third-class ship. It is not surprising that these third-class ships do not appear elsewhere because they were near the ends of their lives when they were included in this inventory. There is no inventory which has been shown conclusively to date from the decade of the 360's, and thus the earlier histories of these vessels is unknown.

Line 82: This line gave the total number of vessels listed in this section of the inventory. The number must have been recorded at the top of the next column.

⁷⁸ The Φήμη listed in I 2012c, line 73 is clearly different from the one entered in *IG II²* 1611, line 303 because the first ship was in Piraeus at the end of the year 358/7, while the other was at sea at the beginning of 357/6 and thus also at the end of 358/7. The ships listed in *IG II²* 1611, lines 285–350 seem to be first class or ἐξάρετοι.

I 2012a

This fragment of a naval inventory was found on June 1, 1934, in disturbed fill beneath the exedra to the west of the Metroon. The piece of Hymettian marble is broken all around and composed of two joining fragments (Pl. 43). It preserves parts of two columns of nonstoichedon text. The columns are probably different from those preserved on I 2012c and I 3227. The surface of the stone is somewhat worn, and the lines inscribed on it were not laid out evenly with a straightedge. The fragment should come from the front of the stele. It belongs with I 2012b, c and I 3227. Previously published: Schweigert 1939, no. 5, fragment C; note that the Agora inventory number was incorrectly given there as I 2012b.

P.H. 0.12 m.; p.W. 0.12 m.; Th. 0.032 m. L.H. 0.005–0.007 m.

a. 358/7 a.

NON-ΣΤΟΙΧ.

Col. IV	Col. V
[---6-8---]ει Ι, [Σειρ]ῆνι Ι.ῶν ἀριθμ[ός] [Ι]στῶν ἀκατέι ΔΙ. [Κε]ραῖαι Ἀκάτει·	π[αραρυμάτων λευκ] ἀρ[ιθμός] -----·]
5 [τα]ῖσδε τῶν νεῶν [το]ύτων ἐν τοῖς	15 τα[ῦτα γίγνεται] ἐπὶ [ναῦς -----·]
[νε]ωσοῖκο[ι]ς [κερ]α[ι]ας ἀκα-	παραρυ[μάτων τριχ] ἀριθμ[ός] -----·]
10 [τείου]ς παρα- [κειμέν]ας κα-	20 ταῦτα γίγ[νεται] ἐπὶ ναῦς [-----·]
[τελ]άβομεν· [τῶν πρώτων]	[ὕποβλ]ημ[άτων ἀριθ] [ἐπὶ ναῦς] Δ[---·]
	[καταβλημάτων ἀριθ] [ἐπὶ ναῦς -----·]
	25 [σχοινίων ἀριθ ἐντελ] [ἐπὶ ναῦς -----·]
	[καὶ ἐπίγυων -----·] [καὶ ἀγκυρείων -----·]

Epigraphical Commentary

Line 2: The name Σειρήν fits this space well, as it is the only known ship's name which ends -ῆνι in the dative singular. This name was Schweigert's restoration.

Line 4: The height of the letters in this line is larger than that in the other lines of this fragment: L.H. 0.007 m. Cf. I 2012c, lines 18, 54 (p. 191 above).

Lines 10–12: For this restoration, cf. I 3227, lines 14–15 (p. 184 above); I 2012c, lines 7, 23–24 (p. 191 above).

Line 13: The left vertical of pi is visible here.

Lines 21–22: Of the dotted eta, the dots of the top left and right verticals and the bottom of the right vertical are preserved, of the dotted delta, the junction of the left and right diagonals. [παρ]αρυ[μάτων (?) -----·] [-----]Δ[-----] Schweigert. While I agree with his reading of the second preserved letter of line 21, I saw the preceding one as the remains of an eta and not an upsilon. Schweigert's reading produces an unattested instance of three entries for the παραρύματα; for the standard entry for this decade, see, for example, IG II² 1612, lines 73–79 and the discussion below (pp. 201–202).

Lines 23–24: I have restored the καταβλήματα in line 23 because they are always listed immediately after the ὑποβλήματα in the 350's: IG II² 1611, lines 58–62, 238–241 and 1612, lines 69–73, and see discussion below (p. 202).

Lines 25–28: These lines are restored after IG II² 1612, lines 80–82. Line 2 of I 2012b follows immediately after line 28; cf. IG II² 1612, lines 80–86.

Lines 1–12: These lines continue to list more equipment assigned to ships, and the entries follow the patterns of those in I 3227 and I 2012c discussed above. Lines 1–3 give the end of the list of ships having ἱστοὶ ἀκάτειοι. From the total number of pieces of equipment, eleven ships were listed. In line 2, the Σειρήν listed there is recorded only in 358/7 here and in I 2012c, line 77.

Lines 4–12: The heading and introductory formula for the next section, which involved the κεραῖαι ἀκάτειαι; for this introductory formula, see *IG* II² 1611, lines 142ff., 173ff., 197ff., 210ff., 230ff. The ships would have been listed after line 12 with two κεραῖαι each.

Lines 13–22: This section records the total amount of equipment available and the number of ships which it is possible to equip with this gear; no ships' names were listed.

Lines 13–16: Cf. *IG* II² 1611, lines 62–64 and 1612, lines 73–75. The παραρύματα λευκά and the παραρύματα τρίχινα always appear in the plural, and each ship had two of each type.⁷⁹ In its most general meaning, the word παραρύματα is anything drawn or pulled along or over something else. The παραρύματα λευκά were probably made of canvas, while the παραρύματα τρίχινα were evidently made from something hairy, perhaps hide with the hair still attached, rather than fabric woven of hair thread, which would serve no purpose. The location of the παραρύματα (here a side screen) is clear from two literary references. On one occasion described in the *Hellenica*, Konon wished to hide preparations being made on his ship at Mytilene.⁸⁰ He placed the ἐπιβάται, or marine soldiers, in the hold and τὰ παραρύματα παραβαλόν. The only way the ἐπιβάται could be seen would have been through the space between the top of the outrigger and the edge of the deck. The space was clearly covered by the παραρύματα, which seem to have been let down from the underside of the deck, as one ship in the naval inventories is described as needing its side screen nailed down.⁸¹ The description of the Spartan preparations before Aigospotamoi indicates that unrolling the παραρύματα was a standard preparation before battle.⁸² The παραρύματα were, therefore, fastened to the underside of the deck, and each one covered the entire side of the ship, protecting the rowers from spears and arrows; hence two were needed, one for each side of the vessel. They may also have been used in rough weather to provide protection for the top level of rowers.⁸³

Lines 17–20: Cf. *IG* II² 1612, lines 76–79.

Lines 21–22: [παραρ]υμ[άτων (?) ----][----]Δ[-----] Schweigert. This gave the παραρύματα three entries instead of two as one would expect; compare, for example, *IG* II² 1612, lines 73–79. The restoration for lines 12–14 is certain, even though only the first letter of the equipment is preserved, because the item has to be one of those which is at least two per ship, as is clear from the phrase τα[ῦτα γίγνεται] ἐπὶ [ναῦς --]. If there were only

⁷⁹ A fifth term, παραβλήματα, is attested only once epigraphically, in *IG* II² 1604, line 31, where the word is in the plural. It seems to be synonymous with παραρύματα. For secondary literature, see Morrison and Williams 1968, p. 302; Casson 1971, pp. 88, 237, note 61, 249–250. *IG* II² 1611, lines 244–253, lists two of each type of παραρύματα on each ship. *IG* II² 1612, lines 73–79, lists 104 παραρύματα λευκά as being on fifty-two ships and 198 παραρύματα τρίχινα on ninety-nine ships.

⁸⁰ Xenophon, *Hell.* 1.6.19.

⁸¹ *IG* II² 1604, line 31; Morrison and Williams 1968, p. 302.

⁸² Xenophon, *Hell.* 2.1.22. The phrase used here is παραβλήματα παραβάλλων, which is the only occurrence of the word in literary texts of the Archaic and Classical periods; see note 79 above.

⁸³ Polyainos 3.11.13; Morrison and Williams 1968, pp. 282, 288, note 21.

one piece of equipment per ship, the entry would have read: equipment name, ἀριθμὸς ἐπὶ ναῦς, followed by a number; see lines 16–22; *IG II²* 1611, lines 58–64 and 1612, lines 69–79. The ὑπόβλημα and the κατάβλημα, which usually precede the παραρύματα, are always one per ship; see *IG II²* 1611, lines 58–62, 238–249, 299–302, 336–339, 387–389, 407, 411–413, 436–439; 1612, lines 69–76, 268–270; 1613, lines 234–237; 1615, lines 168–171; 1626, lines 18–21, 37–40; 1627, lines 443–446; 1628, lines 583–585; 1629, lines 1088–1061. Thus I have put the ὑπόβλημα in lines 20–21, because, when the ὑπόβλημα and κατάβλημα are listed together, the ὑπόβλημα always comes first; see *IG II²* 1609, lines 86, 101, 115; 1611, lines 58–60, 299–300, 336–337, 387–389, 411–412, 435–436; 1612, lines 69–71, 268–269, 308, 363; 1613, line 176; 1615, lines 168–169; 1620, lines 27–28; 1621, lines 10, 31, 103, 114; 1622, lines 7–8, 20, 32–33, 159–160, 178–179, 192–193, 206–207, 221–222, 288–289, 305–306, 323–324, 335–336; etc. Although in the 350's the ὑπόβλημα and κατάβλημα always precede the παραρύματα and the σχοινία always succeed the παραρύματα, the σχοινία will not fit here; cf. *IG II²* 1611, lines 58–64; 1612, lines 71–82; 1613, lines 261–267. For the abbreviation of the word ἀριθμὸς, see *IG II²* 1611, line 62.

The κατάβλημα and the ὑπόβλημα were also listed among the awnings or screens and are in the singular except when the totals of equipment are given, as in this line.⁸⁴ Each ship had only one κατάβλημα and one ὑπόβλημα.⁸⁵ These two pieces of equipment were clearly similar and performed similar functions, since *IG II²* 1628 lists, among the equipment in the possession of trierarchs with ships at sea, one group of unspecified types of ships as having one κατάβλημα and one ὑπόβλημα, while the other list, specifically for tetrereis, includes καταβλήματα but no ὑπόβλημα.⁸⁶ The plural of κατάβλημα must here indicate two, as ships normally had one of each covering. Three years later, in 323/2, both the triereis and the tetrereis at sea are described as having one κατάβλημα and no ὑπόβλημα.⁸⁷ Both κατάβλημα and ὑπόβλημα, related to the verb βάλλω, contain the idea of throwing or hanging something down from something else. The ὑπό- in ὑπόβλημα may also include the sense of “from underneath”, as in the word ὑποζώματα. Since only one κατάβλημα and one ὑπόβλημα were used on a ship, they cannot have been located on the sides of the vessel because two of each would be necessary. They may have provided covering for the bow or for the small cabin under the stern deck.⁸⁸

Lines 25–28: For a discussion of these pieces of equipment, see commentary on I 7316, lines 1–3, p. 210 below.

⁸⁴ See *IG II²* 1611, lines 58–61 and 1612, lines 69–72.

⁸⁵ *IG II²* 1611, lines 238–243; note that no numbers are given, indicating one per ship. *IG II²* 1612, lines 69–72, lists ninety ὑποβλήματα ἐπὶ ναῦς and ninety-one καταβλήματα ἐπὶ ναῦς. The phrase ἐπὶ ναῦς indicates that there was one item per ship.

⁸⁶ *IG II²* 1628, lines 576–588, 592–608. Cf. *IG II²* 1627, lines 436–449, 454–472; here, in 330/29, the unspecified type of ship has one κατάβλημα and one ὑπόβλημα, while the tetrereis have one κατάβλημα and no ὑπόβλημα.

⁸⁷ *IG II²* 1631, lines 257–265, 268–278.

⁸⁸ See also Morrison and Williams 1968, p. 302. The definition given in LSJ⁹ for κατάβλημα may well be incorrect. In Morrison and Williams 1968, it is suggested that the ὑπόβλημα may have been a canvas equivalent of floor boards. As is noted by Morrison and Williams, the ὑποβλήματα were not needed on the tetreres and thus reflect a structural difference between the trieres and the tetreres.

I 2012b

This fragment of a naval inventory was found in disturbed fill beneath the exedra to the west of the Metroon on June 1, 1934. The piece of Hymettian marble is broken all around and preserves one column of nonstoichedon text; traces of another column are preserved along the left edge of the fragment, to the left of lines 4–5 (Pl. 43). It is very similar to I 2012a, but the surface is better preserved. The lines are not especially evenly laid out on the stone. The fragment probably comes from the front of the stele and should be part of Cols. IV and V but six lines below the section of Col. V and eleven lines below the part of Col. IV that is preserved on I 2012a. Previously published: Schweigert 1939, no. 5, fragment D; note that the Agora inventory number was incorrectly given there as I 2012a.

P.H. 0.082 m.; p.W. 0.077 m.; Th. 0.021 m. L.H. 0.005 m.

a. 358/7 a.

NON-ΣΤΟΙΧ.

Col. IV

Col. V

[-----||, -----] ||

5

[ἄγκυρῶν ἀριθμὸς]
 ΔΔΔΔ· αὐτ[αὶ γίνον-]
 ται ἐπὶ ναῦ[ς ΔΔ·]
 ἀσχωμάτω[ν ἀριθμὸς]
 ἐπὶ ναῦς^v || (number) ·]
 ταύτας μὴ[-----]
 νεῶν καὶ [-----]
 [σ]χευῶ[ν -----]
 10 [---~~4~~---] IN[-----]

Epigraphical Commentary

Line 1: This line was not read by Schweigert.

Line 2: The restoration is Schweigert's; cf. line 5 on this stone; I 2012a, lines 13–14, 17–18, 21, 23, 25; *IG II*² 1612, lines 83–86. Line 2 follows directly after line 28 of 2012a.

Lines 3–4: If it is correct to restore two anchors per ship, as it seems to be, the missing number here should be twenty.

Line 6: The stone preserves the vertical stroke of the first numeral listing the number of ἀσχώματα. Thus the number is either very small, less than ten, or very large, i.e., fifty or greater.

Line 1: The “two” preserved at the end of this line was preceded by two ships’ names, probably with a numeral between. The equipment listed on these ships was *χεραῖαι*, and the heading for these vessels is preserved in I 2012a, lines 4–12 (p. 200 above). Nine lines came between the end of the heading and the line preserved here. Probably eight contained two ships’ names each and one contained the heading for the second class.

Lines 2–6: These lines continue to record the total amount of materiel available and the total number of ships to which it was or could be assigned. This section of Col. V is separated from the same column on I 2012a by six restorable lines of text, but the two fragments do not join.

Line 2: For examples in which anchors are listed before ἀσχώματα, see *IG II*² 1611, lines 259–267 and 1614, lines 162–163; cf. *IG II*² 1612, lines 58, 83–86. The ἄγκυραι, or anchors, were also considered to be “hanging equipment”, presumably because they hung when in use. The standard number of anchors was two; in *IG II*² 1611, eighteen anchors

are said to be on nine ships, while in *IG II*² 1612, 107 anchors are on fifty-three ships, leaving one extra.⁸⁹ In some cases, the number of anchors on a ship is specified as two.⁹⁰ On many occasions, anchors are listed in the plural but without any number; the plural here must mean two.⁹¹ Conversely, the singular indicates that the ship had only one anchor. In four instances, the anchors are described as made of iron;⁹² since the material is normally unspecified, they may normally have been of another material, perhaps lead and wood like the commercial anchors.⁹³ Stone anchors were no longer used on warships in the Classical period.⁹⁴

Line 5: For the small number of ἀσχώματα which seem to be preserved here, compare *IG II*² 1612, line 58. The ἀσχώματα were leather sleeves or bags fitted to the inside of the thalamian, or lowest, oar ports to keep water from coming into the ship through the oar ports.⁹⁵ Without the ἀσχώματα, any ancient warship would be filled with water in the slightest waves. The ἀσχώματα appear most prominently in the earlier inventories from the decade of the 370's, especially in *IG II*² 1604.⁹⁶ They are listed in the inventories of the 350's among the equipment on specific ships and in the totals of the gear.⁹⁷ Their last appearance is in 330/29 among the old junk ἐν τῷ οἰκήματι τῷ [με]γάλῳ τῷ πρὸς ταῖς [πύ]λαις; their condition is noted as rotten.⁹⁸ It appears that the ἀσχώματα were generally considered part of the ship and not removable.

Lines 6–9: These lines should conclude this section of the inventory, but because of the lack of preservation, it is not clear what was inscribed here.

II. ATHENIAN AGORA I 2542

This fragment of a naval inventory was removed from a marble dump in the southwest part of the Agora square on February 26, 1935. The piece of Hymettian marble preserves part of one column of nonstoichedon text (Pl. 43). The surface of the marble is worn. The fragment may be part of the same stele as I 7316, since both fragments contain similar mistakes. It does not belong with I 2012a–c and I 3227, as published by Schweigert. The fragment certainly

⁸⁹ *IG II*² 1611, lines 279–281 and 1612, lines 83–86. Cf. also *IG II*² 1611, lines 259–263, where six ships have two anchors each, but the last one, the Ναύκρατις, has only one. For secondary literature, see Morrison and Williams 1968, pp. 200, 302–303; Casson 1971, pp. 250–256.

⁹⁰ *IG II*² 1609, lines 50, 58, 70, 85; 1611, lines 259–263; 1624, line 119; 1627, lines 144, 469; 1628, lines 588, 606; 1629, line 1082; 1631, lines 265, 276–277.

⁹¹ *IG II*² 1611, lines 382, 414, 420; 1612, lines 263, 300, 310, 316, 341; 1622, lines 11, 36, 163, 210, 225; 1625, line 20; 1626, line 23.

⁹² *IG II*² 1610, lines 19–20 and 1627, lines 282, 449, 469.

⁹³ Casson 1971, pp. 253–256.

⁹⁴ Casson 1971, p. 256 and note 131.

⁹⁵ Scholiast on Aristophanes, *Ra.* 364; *Ach.* 94–97. In the latter passage, a man, who is described as looking like a warship, is said to have an ἄσχωμα around his eye (the eye equals the oar port). See also Morrison and Williams 1968, pp. 283–284, 288, note 24; Morrison and Coates 1986, pp. 169–170.

⁹⁶ *IG II*² 1604, lines 5, 7–9, 11, 14, 19–22, 24, 27, 32, 33, 36, 39, 42, 45, 47–50, 53, 55, 63, 74, 76, 78, 79, 81, 84, 88–91, 93, 94, 98; 1605, lines 27–28, 47; 1608, lines 14, 26, 30; 1609, line 23.

⁹⁷ *IG II*² 1611, line 264; 1612, line 58; 1614, line 163; cf. *IG II*² 1622, lines 682, 714.

⁹⁸ *IG II*² 1627, lines 279–281, 351.

belongs with the inventories of the 350's. Previously published: Schweigert 1939, no. 5, fragment E.

P.H. 0.088 m.; p.W. 0.057 m.; Th. 0.05 m. L.H. 0.004 m.

a. 360–350 a.

NON-ΣΤΟΙΧ.

	[ἐργον τ]ριή[ραρχοι]
	[---ca. 6---]μος Παμ[βωτάδης,]
	[---ca. 7---] Πλωθεύ[ς,]
	[---ca. 8---]ος Εὐωνυ[μεύς]
5	[τῶν ξυλίν]ων ἔχουσι
	[ταρρόν, πη]δάλια, <i>vacat</i>
	[παραστάται]ς, κοντούς
	<i>vacat</i>
	<i>vacat</i>
10	[-----]ς

Epigraphical Commentary

Line 1: For the restoration [ἐργον], see *IG* II² 1611, lines 287, 303, 311, 324, 328, 342, 352, 356, 362.

Line 3: The mason carved Πλωθεύς, the contracted form of Πλωθειεύς. This spelling is attested *ca.* 420 in *IG* I³ 258, line 15 and consequently is not a mistake here.⁹⁹

Line 5: The mason originally carved a zeta for the sigma in ἔχουσι and then carved a sigma on top of his mistake; cf. comment on *I* 7316, line 12 (p. 208 below). This line must introduce the type of equipment, either τῶν ξυλίνων or τῶν κρεμαστών; of these two choices, only τῶν ξυλίνων fits the space and the type of equipment listed here.

Lines 6–7: These restorations are Schweigert's and fit the spaces perfectly. The only other piece of "wooden equipment" which ends in a sigma in either the accusative singular or plural and is not already mentioned in the preserved text is κεράλα, but this word is too short for the space.

Lines 1–7: This entry comes from the section of the inscription cataloguing equipment which the trierarchs had on board their ships at the time the inventory was made. It is clear that the equipment was not owed when the inventory was made because the trierarchs are specified as having and not owing the gear listed. The line or lines preceding line 1 would have contained the ship's name and the name of the builder. For the phrase in line 5, see *IG* II² 1611, lines 293, 306, 315, 331, 345, 365, 374; 1613, lines 185, 193, 215, 293; 1620, lines 20, 66; 1622, lines 171, 317.

The παραστάται are enigmatic pieces of equipment. The word is related to the verb παρίσταμαι and therefore should mean something which stands beside or next to something else. It is not clear, however, where the παραστάται were used on the ship or what their function was. It has been suggested that they were used to help hold the mast in place, i.e., that they stood beside or next to the mast.¹⁰⁰ The παραστάται are frequently, but not always, listed in pairs in the inventories.¹⁰¹ The standard number was two; *IG* II² 1611 lists 454

⁹⁹ Threatte 1980, pp. 304, 305.

¹⁰⁰ Morrison and Coates 1986, p. 160; Casson 1971, p. 237, note 59.

¹⁰¹ Examples of παραστάται listed as pairs: *IG* II² 1604, line 70; 1608, lines 34, 45–46, 67–68; 1609, line 90; 1611, lines 142–170; 1614, lines 45, 55. Examples of παραστάται not listed in pairs: *IG* II² 1606, lines 50–51; 1608, lines 8, 18, 25; 1611, lines 296, 308, 376, 422; 1612, lines 7, 296, 327; 1614, line 78; 1615,

παρασάται for 227 ships.¹⁰² The παρασάται seem to have been used in conjunction with the ἱστὸς ἀκάτειος and κεραῖαι ἀκάτειοι, because all three pieces of equipment disappear simultaneously in the 340's and are last recorded in *IG II*² 1622.¹⁰³ These three pieces of equipment pose a problem, since they were obviously used to sail a ship, but the inventories never list sails for them. If, as has been suggested, they formed an emergency rig, they would have been most necessary immediately after battles, when the main mast, κεραῖαι, and sail were still ashore.¹⁰⁴ What was used as a sail? The παραρύματα, καταβλήματα, and ὑποβλήματα cannot have been cannibalized to provide a makeshift sail because the inventories never list parts of any of these items. Likewise, the sail, if present, could not have been cut up for parts, since the known inventories do not record parts of sails.

The inventories often list three χοντοί, poles, on each ship. Thus *IG II*² 1611 lists 677 χοντοί which were on 225 ships with two extra χοντοί.¹⁰⁵ In some instances, however, the inventories merely list χοντοί in the plural, which in this case probably means three, since this number seems to be standard.¹⁰⁶

Line 10: This line should represent another entry which was not related to that in lines 1–7.

III. ATHENIAN AGORA I 7316

This fragment was found in a modern wall in section PP at S/10–13/17 on June 9, 1971. The piece of Hymettian marble is broken above, at the right side, and below (Pl. 44). The left side is the left edge of the stele. The stone was badly damaged when it was reused to line a bothros. All of the first column and part of the second were destroyed by acid, and the entire fragment is badly discolored, making it difficult to associate it with other pieces. The stone

lines 17, 101. *IG II*² 1611, lines 142–172, lists παρασάται on different classes of ships. The number of παρασάται on each ship is preserved except on four, but it is possible to restore the number of παρασάται on them: the total number of παρασάται is given as seventy-four, which breaks down into twelve on τῶμ πρώτων, nineteen on τῶν δευτέρων, leaving forty-three for τῶν ἐξαιρέτων. Very conveniently, thirty-nine παρασάται are actually preserved for τῶν ἐξαιρέτων, and four ships have no number preserved, the Κρατισ[τη] (line 165), the Ολο[τω] (line 167), the Εὐτυχ[εῖ] (line 168), and the Πανη[γύριδι] (line 169). Since four παρασάται are not accounted for, each of these four ships should be restored as having one παρασάτης each.

¹⁰² *IG II*² 1611, lines 38–41.

¹⁰³ Otherwise the παρασάται would have to have been used with the main mast, and when the παρασάται went out of use sometime in the 340's, all the ships would have to have been immediately redesigned for new masts which did not use παρασάται. In this case, one would expect to find some older ships still using the older design. The evidence indicates, rather, that the παρασάται simply disappear from the inventories. The main masts clearly fit into sockets that did not require παρασάται to keep them in place, while the smaller masts had to be kept in place by the παρασάται.

¹⁰⁴ Casson 1971, pp. 236–238, especially note 61; cf. pp. 264–267. For main mast and sails left ashore during battles, see Thucydides 7.24.2; Xenophon, *Hell.* 1.1.13; 2.1.29; 6.2.27. It should also be noted that on two occasions two sets of sails are mentioned in the literary sources: Xenophon, *Hell.* 6.2.27; Aristophanes, *Lys.* 63–64; see also Morrison and Williams 1968, p. 298.

¹⁰⁵ *IG II*² 1611, lines 33–37. For some other examples of ships with three χοντοί, see *IG II*² 1611, lines 135–141; 1613, lines 23, 36; 1614, lines 18, 44, 54, 77; 1621, lines 45, 55, 73, 96.

¹⁰⁶ E.g., *IG II*² 1622, lines 203, 217, 318, 727 and 1628, lines 592, 599.

was reused three times, first as a threshold, at which time the back was cut down *ca.* 0.03 m. and heavily worn. A band *ca.* 0.085 m. wide was left along the edge as a doorstep. Then the stone was used to line a bothros. Finally, it was built into a modern wall, where it was found in 1971. The lines are not aligned between the two columns, which run into each other in several places. The letters are not well spaced and only moderately well carved. Several mistakes were made by the mason. This fragment may belong with I 2542, which contains the same mistake in line 5 as the one here in line 12 (see commentary, p. 205 above).

P.H. 0.35 m.; p.W. 0.27 m.; Th. 0.09–0.118 m. L.H. 0.003–0.004 m.

a. 355/4 aut 354/3 a.

NON-ΣΤΟΙΧ.

Col. II	Col. III
<p>[--⁵--]ΟΟΠ [ἀ ἐπὶ τῇ]ν Ὀμόν[οιαν] [ὥφειλε]ν, σχοιν[ία] [ἀ ἐπὶ τῇ]ν Φῆμην 5 [παραρ]ύμ(α)τα λε[υκ.] α Χαρίσιον [ἀ ἐπὶ τῇ]ν Ὀμόνοϊαν [ὥφειλε]ν ὑποζωμά[των] [τὰ ἡμί]σεα. <i>vacat</i> 10 [Φρυναῖο]ν Ἀθμο ὦν [μετὰ 1?]ΕΘΟΝΗΤΟ Γραε [ἀ ἐπὶ τῇ]ν Ἐλευσίνα [ὥφει]λεν <i>vacat</i> [παραρ]υμάτων τρίχι, 15ἐν ἀγκυρῶν [τὰ ἡμί]σεα πρὸς ταῦτα [ἐξήκοντ]α δραχμάς. [Μενεσθ]έα Ῥαμνο [ἀ ἐπὶ] τὴν Ῥαμνο- 20 [υσιάδα] ΕΣΚΟΥΣΑΝ [--⁶⁻⁷--]Ν.. [ὑποζώματ]α, κατάβλημ, [παραρύ]ματα λευκ, [παραρύ]ματα τρίχι, 25 [--⁸---]Σ. [--⁶α 7--] Κο[λ]ωνῆ, [--⁶α 7--] Ἀναγυρ [ἀ ἐπὶ τὴν ¹or²]τὴν ὥφειλο(ν) [ὑποζώμ]ατα 30 [ἀ ἐπὶ τὴν] Εὐαμερίαν Ο</p>	<p>παρ[α]ρύματα --.] Γλαυ[--] ἀ ἐπὶ τ[ὴν] - ὥφειλεν 35 σχοινί[α, -.] ἀ ἐπὶ τὴν Ἰφ[ι]γένειαν ιστίον, το[π]εῖα. Περικλέα Χο[λ]αργέα ἀ ἐπὶ τὴν Ἀκτί[δα] 40 ὑποζωμάτων [τὰ ἡμίσεα] ἐβ(δ)ομήκοντα [καί] πέντε τὸ πρὸς τ[αυ]τα -] μενον τῶμ ὑποζω[μά-] των οὐκ ἀποδέδωκ[ε]. 45 Καλλιμαχον Ἀναγυρ[άσιον] ἀ ἐπὶ τὴν Πολιάδα ὥφειλεν κατάβλημ[α]. παραρύματα τρί[χι]. Νικίαν Λαμπ(τ)ρέ[α] 50 ἀς ἐπὶ τὴν Σίμα[ι]θαν [ὥφειλ]εν κα[τάβλημα]</p>

Epigraphical Commentary

Line 1: The first dotted omicron is preserved as the right and top left three-quarters of a circle, the second dotted omicron as the top right quarter of a circle.

Line 2: Traces of a round letter provide the first (dotted) omicron. The nu must be the end of the phrase ἐπὶ τήν because of the spacing and a comparison with other uses of the phrase on the stone, especially lines 39 and 46. The only known ship's name which begins OMON is the Ὀμόνοια, hence the restoration.

Line 3: The word σχοινία is always in this form except in the phrase πλὴν δὲ σχοινίων, hence the restoration here. The word ὤφειλε seems to fill the space before the σχοινία perfectly; cf. lines 8 and 47.

Line 4: The dotted phi is represented by a circle not quite closed at the bottom and a dot from the very top of the vertical. Since the ship's name is clear, the nu must be the last letter in the phrase ἐπὶ τήν, which is part of the standard formula used to refer to a ship in this inscription.

Line 5: Of the dotted upsilon, the vertical and left arm are visible. The letters ΥΜΑΤΑΕ can only be part of the words παραρύματα λευκ. The mason forgot to cut the crossbar on the first preserved alpha in the word παραρύματα. For another example of this piece of equipment on this stone, see line 23.

Line 6: The dotted alpha is preserved as two diagonals.

Line 8: ὤφειλε fills the space perfectly. For a parallel example on this stone, see lines 46–47.

Line 9: In the naval inventories, the only word ending -σεα is ἡμίσεα, hence the restoration here and on lines 16 and 40; cf. *IG II²* 1612, lines 267, 345, 369 and 1622, lines 45, 74, 136, 144, 182, 197, 245, 269, 328.

Lines 10–11: In line 10, Phryniaos II (*PA* 14996) is the only man of the appropriate class from Athmonon whose name fits this space. The phrase ὧν μετὰ is attested in *IG II²* 1612, lines 264, 282, 342. In line 11, the dotted theta is visible as the traces of a round letter. Could ΕΘΟΝΗΤΟ be an error for Θεόγνητος¹⁰⁷ and ΓΡΑΕ a mistake for Γαργ(ήτιος)? Several men are attested in Athens with the name Θεόγνητος, but they are either the wrong age or from the wrong deme; see *IG I³* 1190, line 111 (*PA* 6730) and 1192, line 67 (*PA* 6731); *SEG XXXVI* 220, line 10.

Line 12: The mason accidentally carved a zeta for the sigma in Ἐλευσίνια and then carved a sigma on top of his mistake. For the same mistake, compare *I* 2542, line 5; see commentary, p. 205 above.

Line 13: The dotted lambda is preserved as the right diagonal and the very top of the left diagonal of a triangular letter. Of the dotted epsilon, the left vertical and the central horizontal strokes are visible.

Line 15: The dotted epsilon is preserved as the left vertical and the central horizontal strokes.

Line 17: A number ending in alpha is needed here before the word δραχμάς; ἐξήκοντα is the only number that will fill the space.

Line 18: The dotted epsilon is preserved by the bottom horizontal strokes and the right ends of the middle and top horizontal strokes. The only known man of the appropriate class from Rhamnous whose name fits this space is Menestheus I (*PA* 9988).

Lines 19–20: The name of the ship is unattested, and no known names begin Ῥαμνο-; the name means “of or having prickly shrubs”. Other ships with names of plants include the Ἀνθηρά, Ἀνθουσα, Εἰρίς, and Ῥοδωνία.

Line 22: For the word preceding κατάβλημ, παραρύματα is not appropriate since both kinds appear in the next two lines, and ὑπόβλημα does not fit the space; hence the restoration ὑποζώματα (see comment on lines 6–9, pp. 211–212 below).

Line 24: The dotted alpha is visible as the right diagonal and the very top of the left.

Line 26: Of the dotted lambda, the two diagonal strokes of a triangular letter are preserved. The only word ending -ωνη is the abbreviation for the deme Kolonai; hence the restoration here.

Line 28: The mason clearly made all the vertical strokes for τήν and then went back and put in the horizontal and diagonal strokes. In doing so, he misplaced the horizontal stroke for the eta, placing it between the right vertical of the eta and the left vertical of the nu. He compounded his problems by carving two phis in ὤφειλο and, realizing his mistake, turned the second one into an epsilon. The first part of the line should have contained the phrase δὲ ἐπὶ τήν and a ship's name ending in -τήν. Of the extant names, the only possible candidate is the Ἀρετή, which makes the letters in the line very cramped. The unattested names Ῥητή, “spoken or famous”, or Ἀκτή, “peninsula or rugged coast”, might fill the space better; for similar names, compare the Κλεώ, Φήμη, Εὐλιμένη, Παραλία, and Ψαμάθη. It should be noted that the extant letters of this line run over into the next column.

¹⁰⁷ For problems with the ΓΝ combination, see Threatte 1980, p. 565.

Line 29: The two diagonal strokes of the dotted alpha are extant. The only word that both fits the space and ends in -ατα is ὑποζώματα; hence the restoration here.

Line 31: Of the dotted omicron, the left half of a circle is preserved.

Line 32: Since all the equipment listed in this fragment is from the “hanging gear”, this word should also be a piece of “hanging equipment”; thus, it has been restored as παραρύματα. It is impossible to tell which kind it was.

Line 33: This combination of letters is too common to make a restoration possible.

Line 34: In order to allow space for the verb, the ship’s name must have been fairly short, as, for example, Δία, Ἐννῆ, Ἐως, Ἡβη, Κλέω, Νέα, Φῶς, and Ὠρα, all of which are attested during the 350’s.

Line 35: For this restoration, see note above on line 3 (p. 208).

Line 36: The first letter of the ship’s name is clearly an iota. Despite the chipped edge of the fragment, enough of the second letter is preserved, the left half of the circle and the bottom of the vertical, to make phi the only possible letter. The ship’s name, “strong born”, is unattested, but very few words begin ΙΦ. For other ships with similar names, compare the Ἀλκμήνη, Δυνατή, Κρατίστη, and Ῥώμη.

Line 37: The dotted omicron is visible as the lower left part of a circle. The second piece of equipment should be either τοπεῖα or τόνος, because these are the only pieces of “hanging gear” which begin το-. It ought to have read τοπεῖα, because this was the more common piece of equipment. The τόνος is mentioned only three times in the extant inventories and never in this type of context; see *IG II²* 1610, line 23 and 1613, lines 280, 282, and discussion below (p. 212).

Line 38: Of the dotted alpha the two diagonals are preserved, of the dotted omicron, the lower left part of a round letter. Although Perikles’ demotic is not fully preserved, the restoration Χολαργεύς is the only one possible because the only bearers of that name of the appropriate social class come from this deme.

Line 41: The mason wrote ἐβλομήκοντα, neglecting to put the horizontal stroke on the delta.

Line 44: Of the dotted kappa, only the bottom of the left vertical is preserved.

Line 47: Of the dotted mu, the junction of the left vertical and diagonal is extant.

Line 49: The stone cutter has made another mistake, carving Λαμπρε for Λαμπτρέ.¹⁰⁸

Line 50: The dotted alpha is visible as the left diagonal and the top of the right one.

Line 51: The dotted epsilon is preserved as the top horizontal stroke and the right two-thirds of the middle one. The dotted kappa is visible as the top of the left vertical and the top of the upper diagonal, the dotted alpha as the junction of the two diagonals. The word ὥφειλεν fits the space; compare lines 45–47. Since all the equipment listed in this fragment is from the “hanging gear”, this piece should also be “hanging equipment”; hence the restoration κατάβλημα, which is the only piece of “hanging equipment” beginning κα- (cf. line 47). The epigraphically possible κλιμακίδας cannot be restored here because it was “wooden”, not “hanging equipment”.

Both Cols. II and III list equipment owed to the state by former trierarchs. Each entry lists the names of the trierarchs in the accusative, then a pronoun standing for the equipment which was on the ship named such and such. After this section, the equipment is recorded, but when the list of gear is on the first ship under the trierarch’s name, it is preceded by a form of the verb “to owe”, the person of which depends on the number of trierarchs involved; see lines 33–37 and 45–48.¹⁰⁹ All the equipment included in these two columns seems to be “hanging gear”, which suggests that in this particular inventory the lists of trierarchs owing equipment were divided into lists of “wooden” and “hanging gear”. As is clear from lines 33–37, a trierarch could owe material from more than one vessel.

¹⁰⁸ While Threatte cites five certain examples of the intentional spelling Λαμπρέυς, only two of the examples are dated to the 4th century B.C.: Threatte 1980, p. 572. In view of the rarity of the form and the other mistakes made by the mason, we should take this spelling here as a mistake.

¹⁰⁹ The exact same format is used in *IG II²* 1612, lines 262–380 and I 7450; see discussion above (p. 182) on date.

Lines 1–3: Line 1 should be the trierarch's name because line 2 gives the name of the ship and line 3 has the verb. The 'Ομόνοια listed here ought to be the same vessel as the one in line 7 because only one ship with this name is known to have existed in the 350's and the ship is registered under two different trierarchs' names. Another ship with the same name is recorded in *IG II²* 1629, line 655 and 1632, line 36.

The term σχοινία is a collective noun which describes a group of ropes used on the triereis.¹¹⁰ This class of ropes includes at least two types. In the earlier half of the period covered by the inventories, the σχοινία are described as either σχοινία ἐπίγυα¹¹¹ or σχοινία ἀγκύρεια.¹¹² In the later documents, the σχοινία are described either as ὀκτωδάκτυλα or as ἐξδάκτυλα, i.e., as either eight-finger or six-finger ropes.¹¹³ The number of σχοινία ἐπίγυα varies from two to four, while the number of σχοινία ἀγκύρεια is always four, if the number of ropes is specified. In the later inventories, there are regularly four σχοινία ὀκτωδάκτυλα and four σχοινία ἐξδάκτυλα. Thus the two earlier categories of σχοινία were replaced by the two later types, but it is not clear which of the earlier types is a six-finger and which an eight-finger rope. The σχοινία ἀγκύρεια are ropes attached to the anchors, and there seem to have been two per anchor.¹¹⁴ By these ropes, the anchors were raised and lowered from the anchor platforms at the prow. The σχοινία ἐπίγυα were defined by Harpokration as meaning τὰ πρυμνήσια,¹¹⁵ i.e., the cables which come from the πρύμνα, or stern. The stern cables were used to moor the stern of the ship when she was beached or at a dock.¹¹⁶

Line 4: The Φήμη is also attested in *I* 2012c, line 73 (p. 191 above) and *IG II²* 1611, line 303. The former is described as second class; the latter is probably first class because all the ships recorded in *IG II²* 1611, lines 285–350 seem to be first class or ἐξαίρετοι. Since this

¹¹⁰ The σχοινία are clearly a group rather than individual items. The word regularly is in the plural (σχοινία) rather than the singular (σχοινίον). Some of the earlier inventories describe the group as σχοινία ἐντελῆ, as, for example, *IG II²* 1605, lines 42–43 and 1609, lines 50, 79, 115.

¹¹¹ *IG II²* 1611, lines 254–258; 1612, lines 80–81; 1622, line 292.

¹¹² *IG II²* 1609, line 101; 1611, lines 393, 440; 1612, lines 80–82, 278; 1613, lines 179, 239; 1622, line 341.

¹¹³ σχοινία ὀκτωδάκτυλα: *IG II²* 1624, line 117; 1626, lines 23, 27, 41; 1627, lines 123–124, 129, 447, 471; 1628, lines 310, 315, 586, 607; 1629, lines 427, 431, 434, 436, 439, 1062, 1083–1084, 1137; 1631, lines 264, 277, 328, 419–420. σχοινία ἐξδάκτυλα: *IG II²* 1624, line 118; 1626, lines 22, 28, 42; 1627, lines 124–126, 130–132, 448, 472; 1628, lines 311–312, 316–317, 587, 608; 1629, lines 428–429, 440–441, 1062–1063, 1084; 1631, lines 265, 277–278, 420; 1632, lines 4–5. Sterling Dow suggested (personal communication) that perhaps “six-finger” and “eight-finger” do not refer to the thickness of the rope but to the number of strands used to make each cable.

¹¹⁴ Four is the standard number of σχοινία ἀγκύρεια for the trieres, while each trieres has two anchors: *IG II²* 1612, lines 83–86, where 107 anchors are on fifty-three ships with one extra.

¹¹⁵ Harpokration, s.v. ἐπίγυιον.

¹¹⁶ The classification σχοινία may have included types of rope other than the σχοινία ἐπίγυα and the σχοινία ἀγκύρεια. If so, these other ropes are not listed. It should be noted that there is no term for the forestays or the backstays; these two ropes held the mast in place, one attached at the stern, the other at the prow. Perhaps the triereis and the tetrereis were rigged without forestays and backstays. The word for backstays, ἐπίτονος, appears only in *Odyssey* 12.423. In identifying the terms in the naval inventories, one ought not look for a term for the shrouds (cables securing the mast and attaching amidships), since the *Olympias* has conclusively proved that no shrouds were used. Shrouds would have obstructed the sail yard and some of the rowers: Morrison 1988, p. 175; Morrison and Coates 1989, p. 28.

ship is the second one listed in this entry, it is probably second class and the same vessel as the one in I 2012c, line 73.

Line 5: For a discussion of the *παρὰρύματα*, see comment on I 2012a, lines 13–16 (p. 200 above).

Lines 6–9: The phrase *ἃ ἐπὶ τὴν* plus a ship's name occurs elsewhere: see *IG* II² 1612, lines 273, 289, 291, 294, 302, 315, 317, 325, 334, 348, 354, 361, 365, 371, 380 and I 7450, lines 21, 29 (p. 216 below). The *Ὁμόνοια* entered in line 7 is probably the same as the ship in line 2. No other ship with this name is known from the 350's. Line 6 contains the name of the trierarch who commanded the *Ὁμόνοια*. Could this *Χαρίσιον* be *Χαρίσιος* *Ἀλιμούσιος*? If so, it would be the first known liturgy in the family, and Charisios would be rather elderly.¹¹⁷

The most important item of the “hanging equipment” was without question the *ὑποζώματα*, which might be translated as “undergirdles”.¹¹⁸ Essentially their function was to keep the ship in one piece, as wooden ships tend either to droop at the ends and rise in the middle (hogging) or to sink in the center and rise at the ends (sagging).¹¹⁹ Although the *ὑποζώματα* have been the subject of much debate, it is now clear that they were at least twice the length of a trieres and were located inside the ship, running from stem to stern under the walkway.¹²⁰

In the inventories, the *ὑποζώματα* always appear in the plural, but the number normally on a ship is not specified. The ships outfitted for the colony led by Miltiades the Oikist to the Adriatic are specifically listed as carrying two extra *ὑποζώματα*, but the inventory does not give the total number of *ὑποζώματα* that each ship was carrying.¹²¹ The two

¹¹⁷ See Davies 1971, pp. 93–95, 573.

¹¹⁸ Morrison and Coates 1986, p. 245. For other discussions in secondary literature, see Morrison and Williams 1968, pp. 294–298; Casson 1971, pp. 91–92; Morrison and Coates 1986, pp. 170–172. Note that the *ὑποζώματα* are located incorrectly in both Morrison and Williams 1968 and Casson 1971. These two works, however, do provide useful summaries of opinion at the time of publication.

¹¹⁹ Morrison and Coates 1986, pp. 196–201.

¹²⁰ Previously, many scholars placed the *ὑποζώματα* on the outside of the ship and in doing so neglected the literary evidence. The *ὑποζώματα* appear in Plato's *Republic* 616B–C, where the country of the dead is described. There is a straight light which connects the earth and the heavens, just as the *ὑποζώματα* do in a trieres. This light is clearly inside because it is between the earth and the heavens, just as *ὑποζώματα* are inside a trieres or tetreres. Apollonios Rhodios also describes the *ὑποζώματα* during the outfitting of the *Argo* at *Argonautica* 1.367–370. In this description, the *ὑποζώματα* are specified as being inside the ship. Furthermore, *ὑποζώματα* are related to the verb *ὑποζώννυμι*, which is to gird something from underneath; on a ship, the *ὑποζώματα* were underneath the walkway. If the *ὑποζώματα* had run around the ship on the exterior, then the verb used to describe this action would have been *διαζώννυμι*, which means to gird something around. Likewise, if the *ὑποζώματα* had been on the exterior of the ship, they would have been covered with salt and tar, and it would have been impossible either to reuse them or to cut them up; at Eleusis, they were cut in pieces of various lengths and used in the transportation of the marble column drums for the porch of the Telesterion: *IG* II² 1673 with Clinton's additions (1971, pp. 83–113). Pieces are also listed in the naval inventories: *IG* II² 1610, line 26; 1612, lines 267, 319, 345, 369; 1627, lines 410–412. See also Morrison and Coates 1986, pp. 170–172. The difficulty of putting the *ὑποζώματα* in place is clear from a naval decree which specifies the minimum number of men, at least fifty, needed for the operation. The number of men has been partially destroyed in the text, but the stoichedon pattern makes fifty, sixty, and eighty the only possible restorations: *IG* I³ 153, lines 9–10 and commentary.

¹²¹ *IG* II² 1629, lines 31–34, 53–55.

horse transports which were part of the expedition are specifically described as carrying four ὑποζώματα τριηριτικά.¹²² In contrast, the four triakontors are recorded as carrying two ὑποζώματα τριηριτικά.¹²³ The naval inventories do preserve one instance in which the number of ὑποζώματα is specified; in *IG II*² 1631, in the list of equipment received back from trierarchs, there occurs, among other items, the entry of four ὑποζώματα and two others τῶν [ἐγλυθέν]των.¹²⁴ Normally, when ὑποζώματα were returned by former trierarchs, the number of ὑποζώματα was not specified.¹²⁵ From this evidence it would appear that four is not the normal number of ὑποζώματα assigned to a trieres or tetreres. In the inventories of the property of Athena and the Other Gods, however, four ὑποζώματα are mentioned twice in a section listing various “hanging gear”.¹²⁶ This evidence suggests that the total number of ὑποζώματα per ship may have been four,¹²⁷ but the evidence does not seem to be conclusive.

Another piece of equipment which was used with the ὑποζώματα was the τόνος. These are known from the literary sources to have acted as devices for keeping the ὑποζώματα tight.¹²⁸ The τόνοι are rarely mentioned in the naval inventories, appearing only three times.¹²⁹ On two of these occasions, they are listed as captured in war, while on the other they are ἀδόκιμοι, or did not pass inspection. In none of these examples do the τόνοι seem to be in use. The relatively few references to this piece of equipment are explained by the fact that ὑποζώματα and τόνοι are inseparable. The one was understood to be part of the other, and, in fact, the ὑποζώματα could not be installed without a τόνος, since the τόνος was necessary to tighten the ὑποζώματα. The τόνοι listed separately in the naval inventories were included because they were separated from the ὑποζώματα.

Lines 10–17: Lines 10–11 contain trierarchs' names for the entry concerning the Ἐλευσίς. Phrynaios II of Athmonon (*PA* 14996) is known to have been a trierarch several times and is listed in *IG II*² 1622, line 635 and 1629, lines 93f., 111f., 131f.¹³⁰ The Ἐλευσίς was registered as second class in 358/7 in the inventory represented by I 2012c, line 71. The abbreviation τρίχι, found in line 14, is used elsewhere but only occurs with παραρύματα; see *IG II*² 1611, lines 302, 310, 322, 339, 389; 1612, lines 309, 351; 1628, line 585. Lines 15–17, although not completely restorable, suggest that the trierarchs paid for part of the debt in cash. From line 17 it is clear that some cash transaction was involved. The use of the word

¹²² *IG II*² 1629, lines 70, 83–84.

¹²³ *IG II*² 1629, lines 99–101, 114–116, 133–135, 153–155.

¹²⁴ *IG II*² 1631, lines 671–673.

¹²⁵ E.g., *IG II*² 1611, line 410.

¹²⁶ *IG II*² 1479, lines 49, 57.

¹²⁷ Four ὑποζώματα are the generally accepted number per ship: see Morrison and Coates 1986, p. 170; Casson 1971, p. 91; Morrison and Williams 1968, p. 295.

¹²⁸ Plato, *Republic* 616B–C.

¹²⁹ *IG II*² 1610, line 23 and 1613, lines 280, 282. Since *IG II*² was published, several new restorations have been proposed based on a comparison with *IG II*² 1673, line 12: *IG II*² 1610, lines 21–26: σχοινία: Η, κορυφαία, ὑποζωμάτων τόνοι αἰχμάλωτοι ΔΔΓ, τούτων οἱ τρεῖς παρεωγότες Clinton (1971, pp. 89–90). For *IG II*² 1613, line 280: [ὑποζω]μάτων τόνοι ΙΙΙ Clinton (1971, pp. 89–90). [ὑποζω]μ[ά]των τόνοι ΙΙΙ Pritchett (1979, p. 280).

¹³⁰ For the career of this man, see also Davies 1971, p. 558.

δραχμάς is unusual in the naval inventories; see *IG II*² 1612, lines 225–226; 1629, lines 193, 195, 237, 263; 1631, lines 372, 393, 406.

Lines 18–20: Menestheus I of Rhamnous (*PA* 9988) was the older son of the general Iphikrates and is attested as trierarch on several other occasions: *IG II*² 1622, lines 199f., 721f., 729f.; 1623, line 49; 1629, lines 486f.¹³¹ He was general in 356/5;¹³² assuming that the trierarchy occurred in a different year and that this record is from the year immediately afterwards, he would have been trierarch in 355/4, and this document would date to 354/3. For the abbreviation of the demotic in line 18, see *IG II*² 1622, lines 671, 672. The phrase ἀ ἐπὶ τὴν plus a ship's name is attested elsewhere on this stone; see lines 34, 36, 39, 46. The name of this ship is hitherto unattested. ΕΣΚΟΤΣΑΝ in line 20 is not an attested Greek word. It cannot be part of a ship's name, because there is not enough room in the line for the obligatory formula ἀ ἐπὶ τὴν and because a ship is listed in line 19. In this context, the original word might have specified something about the ship.

Lines 22–24: No parallels exist for this abbreviation of κατάβλημα, in line 22. The abbreviation λευκ, in line 23, appears elsewhere but only occurs with παραρύματα; see *IG II*² 1611, lines 301, 338, 388 and 1615, line 170. The abbreviation τρίχι, found in line 24, occurs only with παραρύματα; see *IG II*² 1611, lines 302, 310, 322, 339, 389; 1612, lines 309, 351; 1628, line 585. The equipment recorded in these three lines probably belonged on the Ῥαμνουσιάς.

Lines 26–31: These lines probably all formed one entry. In line 28, the [–]την is presumably a ship's name, as the formula used on this stone is man's name + ἀ(ς) ἐπὶ τὴν + ship's name + ὥφειλε(ν) + the equipment; see lines 45–48. Lines 26–27 then ought to have had the names of the trierarchs connected with this ship. This restoration, however, yields a very crowded line. Normally the phrase ἀ(ς) ἐπὶ τὴν + ship's name + ὥφειλε(ν) takes up 1 1/2 lines; see lines 7–8, 12–13, 46–47. Line 29 ought to have recorded the equipment owed by the trierarchs. They also appear to have owed gear from the Εὐαμερία, line 30. This ship's name is known but not with the Doric spelling; see *IG II*² 1611, line 429. The equipment was listed in line 31 and may have continued, but the stone is broken off here. Possible candidates for line 26 are Philippos (*PA* 14398) and Prokles II (*PA* 12231 bis), but only Philippos is attested as a trierarch: *IG II*² 1609, line 105.¹³³ Four possible candidates exist for line 27: Meidias I (*PA* 9719), Sokrates II (*PA* 13102), Euboios (*PA* 5313), and Nikokles (*PA* 10898).¹³⁴ Of these men, Sokrates II seems a little old, Euboios is not known to be active before 338/7, and a trierarchy for Meidias I at this date does not seem to fit with Demosthenes 21. Nikokles is known as a trierarch from *IG II*² 1622, lines 168–184.

Lines 33–37: Line 33 preserves the beginning of the trierarch's name for this entry. He owed gear from two ships, the name of one of which is not preserved, and hence is unknown. The ship's name in line 36, the Ἰφιγένεια, is unattested. No attested ship's name fits the preserved letters; see the epigraphical commentary above on line 36 (p. 209).

¹³¹ For the rest of Menestheus' career, see Davies 1971, pp. 250–251.

¹³² Isokrates 15.129; Nepos, *Tim.* 3.5; Dionysios of Halikarnassos, *Dein.* 13.

¹³³ For Philippos, see Davies 1971, p. 538; for Prokles II, see Davies 1971, p. 470.

¹³⁴ Meidias I: Davies 1971, pp. 385–387; Sokrates II: Davies 1971, p. 497; Euboios: Davies 1971, p. 188; Nikokles: Davies 1971, p. 409.

The ἱστίον, or sail, was the most important piece of “hanging equipment” after the ὑποζώματα.¹³⁵ The sails for all ancient warships were square pieces of linen, which were probably reinforced with leather straps, as on the reconstructed *Olympias*.¹³⁶ Perhaps the most surprising feature of the inventories is that, while all the inventories up to and including *IG II*² 1622 mention two kinds of masts and two kinds of κεραῖαι, the number of sails is always singular. This evidence would seem to indicate that the same sail might be used on masts and κεραῖαι, which are clearly different in size. In the inventories after *IG II*² 1622, the sails are sometimes described as ἱστίον τῶν λεπτῶν.¹³⁷ This phrase must mean that the sails are particularly light or thin and, by contrast, the other sails are thick.¹³⁸ In some of the inventories the number of sails is given with the notation that so many are light; in *IG II*² 1627, for example, there are 288 old sails, of which seventy-four are light.¹³⁹ It has been suggested that the lighter sails would allow the ship to sail faster, and thus the ἱστίον τῶν λεπτῶν would be used on ships that would need to be fast.¹⁴⁰

Lines 38–44: The Perikles of this entry is otherwise unknown, but by virtue of his name and demotic, he must be related to the 5th-century statesman of the same name and deme. The family, therefore, did continue into the 4th century, and the claim of Honorantiana Polycharmis, *ca.* A.D. 200, that she was descended from Perikles must be taken at face value.¹⁴¹ The Perikles of this entry could be descended from one of the following: Perikles III (*PA* 11810), Xanthippos II (*PA* 11170), or Perikles II (*PA* 11812). Of these three men, only Xanthippos is known to have married, but if we assume a thirty-year generation, it is impossible for him to have had a descendant old enough to be a trierarch at the time of this inventory.¹⁴² Likewise, a descendant of Perikles III would have been too young to be a trierarch.¹⁴³ Perikles II thus becomes the only possible candidate. He was born by 440 and must have married, although the date and his wife’s name are unknown.¹⁴⁴ Perikles II,

¹³⁵ Morrison and Williams 1968, pp. 200, 298–299; Casson 1971, pp. 229–235; Morrison and Coates 1986, pp. 176–177, 190–191.

¹³⁶ Ancient descriptions of sails: Aischylos, *Pr.* 468; Apollonios Rhodios 1.565; Lucian, *Am.* 6; *Anthologia Palatina* 11.404.4, 12.53.8; Athenaeus 5.206c. Representations of sails: Morrison and Williams 1968, Arch. 52, pl. 13, Arch. 63, pl. 16;d, Arch. 91, pl. 21:b; Casson 1971, figs. 145, 147, 154. Linen seems to have been on a contraband list at Athens during the Peloponnesian War: Aristophanes, *Ra.* 364.

¹³⁷ *IG II*² 1623, lines 46, 272–273, 317–318, 333; 1628, lines 34, 105, 116, 126; 1629, lines 10, 490–491, 581–582, 711–712, 719–720; 1631, lines 447–448, 451–452, 456, 461, 465, 469, 472–473, 477–478, 482, 523, 537, 541, 547–548, 553–554, 572, 661; 1632, lines 130, 148–149, 154, 159, 164, 177, 194, 211, 221, 226, 232, 241–242, 246, 251–252, 272–273, 289–290, 305–306, 314, 335–336.

¹³⁸ *IG II*² 1631, lines 415–417; Morrison and Williams 1968, p. 299.

¹³⁹ *IG II*² 1627, lines 63–65. Cf. *IG II*² 1629, lines 369–375.

¹⁴⁰ Morrison and Coates 1986, p. 177.

¹⁴¹ *IG II*² 3679. Davies 1971, p. 460; see also p. 512.

¹⁴² Xanthippos II was born by 460, and his theoretical son, another Perikles, must have been born by 430. This man would have been about 75 in 355 and hence too old. Since Greek names normally skip generations, the man listed in I 7316 would be this man’s grandson, who would be about 15 years old in 355, making him too young to be a trierarch. See also Davies 1971, p. 457.

¹⁴³ Perikles III was born perhaps by 426. The man in this inventory would have to be his grandson and would be about 11 years old in 355, making him much too young to be a candidate. See also Davies 1971, pp. 456–457.

¹⁴⁴ See also Davies 1971, p. 458.

the illegitimate son of Perikles I and Aspasia, seems to have been made an Athenian citizen in 429 after the death of both Xanthippos II and Paralos, his father's two legitimate sons.¹⁴⁵ The citizen status of Perikles II is further confirmed by the fact that he was Hellenotamias in 410/09 and one of the generals at Arginousai.¹⁴⁶ If we assume a thirty-year generation, his son would have been born *ca.* 410 as an Athenian citizen. His grandson, also an Athenian citizen, would have been born *ca.* 380 and have been about 25 years old in 355, making him the right age to be a trierarch. As the grandson of Perikles II, he also would have been called Perikles, making him the fourth known member of the family to bear that name. Perikles IV, then, is the man in line 38 of this inventory. It is not clear exactly what he owed, but it involved some ὑποζώματα and apparently a cash payment. The Ἀκτίς is not otherwise known in the 350's, but several ships of this name existed later and are inventoried in *IG II*² 1629, lines 645–646, 768, 849 and 1631, lines 131, 163, 204, 546.

Lines 45–48: Kallimachos of Anagyrous, in line 45, is presumably *PA* 8005, the father of Ἀλκιμάχη Καλλιμάχου Ἀναγυρασίω, mentioned in *IG II*² 5450, line 6. Ἀλκιμάχη is somehow related to the family of the military leader Kallippos (*PA* 8065), perhaps by marriage.¹⁴⁷ This inventory is the only other known reference to this Kallimachos and confirms his liturgical standing, which was indicated by his connection with Kallippos. This entry records the debt of gear from Kallimachos' trierarchy on the Πολιάς. The ship was registered as first class in 357/6 in *IG II*² 1611, line 148.

Lines 49–51: Nikias of Lamptrai, in line 49, is presumably *PA* 10811, the diaitetes of *IG II*² 1926, line 5, for the year 325/4 and thus born in 384/3. His father may be Nikias I of Lamptrai (*PA* 10810), the trierarch mentioned in *IG II*² 1604, line 27 and the contributor of naval equipment in *IG II*² 1609, line 114.¹⁴⁸ The ship of this entry is listed in line 50, and the gear was recorded in line 51, perhaps continuing beyond this line, but the stone is broken off here. The Σιμαίθα is mentioned in *IG II*² 1611, lines 395ff., with the notation that Demomeles of Paiania owed equipment to the naval yards.

IV. ATHENIAN AGORA I 7450

This fragment of a naval inventory was found in section PP in loose surface fill on April 2, 1973. The fragment of Hymettian marble is broken on all sides and preserves parts of three columns of text (Pl. 44). Of the first column, only enough is preserved to indicate that there was a column here. The back shows traces of reuse as a water channel, like many of the fragments found in Piraeus. The lines in all three columns are aligned, and the letters are fairly evenly spaced and neatly carved. The inscription contains no spelling or carving mistakes. This fragment does not belong with any other Agora fragments or with any of the other naval inventories.

P.H. 0.21 m.; p.W. 0.15 m.; Th. 0.088 m. L.H. 0.003–0.005 m.

¹⁴⁵ Plutarch, *Per.* 37.

¹⁴⁶ Davies 1971, p. 458; Xenophon, *Hell.* 1.5.16, 1.6.29, 1.7.34; Diodorus Siculus 13.74.1; Plutarch, *Per.* 37.

¹⁴⁷ See Davies 1971, p. 276.

¹⁴⁸ See also Davies 1971, p. 407.

a. 355/4 *aut* 354/3 a.

NON-ΣΤΟΙΧ.

Col. I	Col. II	Col. III
	[κατά]βλημα, σ[χοινία]	
1 [-]ΩN	[ἐπὶ τ]ὰς δευτέρας·	[τῶν ξυλίων ἐχουσι]
[-]	ας ἐπὶ τὴν Ἄ[κ]ρυπ[τ]ον	τα[ρρόν, πηδάλια,]
[-] . ΩN	15 κλιμακ[ι]δας·	35 κλιμ[ακίδας, κοντούς?]
[-]N	ας ἐπὶ τὴν Εὐ[πο]ρίαν	παρα[στάτας,]
5 [-]ATΩN	κώπας περ[ι]ν[ε]ως ΓΙΙΙ·	ιστόμ [μέγαν,]
[-]ΩN	ας ἐπὶ τὴν Εὐτυχίαν	κερα[ί]ας μεγάλας·
[-]	κλιμακίδας.	τῶν δὲ κ[ρεμαστών·]
[-]	20 Φυλῖνον Λακιάδην	40 ὑποζώ[ματα, ιστίον?]
[-]	α ἐπὶ τὴν Ἄνυσιν ὥφειλε	ἱμάντε[ς, -]
[-]AN	ταρρόν, πηδάλια,	ἄγκοιν[αν, -]
10 [-]	κλιμακίδας, παραστάτας,	ὑπόβ[λημα,]
[-]A	κοντούς.	[<i>in rasura</i>]
[-]	25 Χάρητα Ἀγγελῆθεν	45 παραρύ[ματα --]
[-]	δν ἐπὶ τὴν Φιλονίκην	ἀγκύρ[ας --]
[-]	ὥφειλε[ν τα]ρρόν,	ἐκ τῆς Α[-]
[-]	[σχοινία ἐπ]ί[ν]υα·	συμ[ορίας --]
	[α ἐπὶ τὴν Ἀταλ]άντην	*Εως Ἀμ[ύντο ἐργον]
	30 [ιστόν μέγ, ιστ]ὸν ἀκάτε,	50 τρυ[φ]ραρχοι --]
	[κεραίας ἀκατ]εῖλος	Διο[--,]
	[-----α 14-16-----]HN	*Αβ[ρωνίδης Κο- ,]
		Νε[-]

Epigraphical Commentary

Lines 1–11: Just enough traces of letters are preserved here to indicate that originally at least one column existed to the left of Col. II. Since only the last letter or last two letters are preserved, no restorations can be made.

Line 12: Of the dotted eta, the two vertical bars are visible. -βλημα is attested only as the end of the words κατάβλημα, ὑπόβλημα, παράβλημα. Of these three words, παράβλημα occurs only once in this class of inscriptions and then in the plural (παραβλήματα, *IG* II² 1604, line 31). The word ὑπόβλημα is too short for the space, hence the restoration κατάβλημα. The word σχοινία is always in this form except in the phrase πλῆν δὲ σχοινίων.

Line 13: Of the dotted tau, the horizontal crossbar and the top of the vertical are preserved.

Line 14: Of the dotted rho, the top of the curve and the bottom of the vertical are visible, of the dotted alpha, the two diagonal bars. Very few ships end in -ος in the nominative, and the combination ΥΠ is also not common. None of the known ships' names will fit here. The name Ἀκρυπτος is previously unattested. The name fills the space, and the very faintest traces of the letters alpha and rho are visible on the stone. Another possible name, Ἀθρυπτος, does not fit the spacing because the theta would take up too much room.

Line 16: Of the dotted upsilon, the tops of the two arms are preserved. This name seems to fit the space and is also attested at this period for a second-class ship; see commentary below (p. 218).

Line 18: This line starts farther to the right than the other lines in this column because line 5 in Col. I extended into Col. II here.

Line 26: The dotted omicron is preserved as the right half of a round letter. It cannot be an omega because there is no horizontal stroke; for a parallel, see *IG* II² 1612, line 312.

Line 27: The only word ending -ρρον in this class of inscriptions is ταρρός.

Line 28: The only word ending -υα is the word ἐπίγυα, which is rare; it occurs only three other times in this class. The space at the beginning of the line is enough for σχοινία. This combination is attested elsewhere in the class: see *IG* II² 1611, lines 255, 257, 258.

Line 29: The ending -άντην fits the known ship's name Ἀταλάντη, leaving enough space for the restoration & ἐπὶ τῇν. For parallel usage on this stone, see line 21.

Line 30: Of the dotted omicron, the right half of a circle is preserved. The combination]ὸν ἀκάτε can only be completed as]στ]ὸν ἀκάτε because ἀκάτειος is only used for the mast and κεφαλαί, and only]στδς can end -ον. The words]στδν μέγ seem to fill the remaining part of the line with μέγ as an abbreviation for μέγαν.

Line 31: The ending -ελος in this class can only come from ἀκάτειος; compare *IG* II² 1609, lines 75–76, 81 and 1615, line 10, used with κεφαλαί; 1613, lines 113, 130, 147, 219 and 1616, line 142, etc., used with]στδς. Since the mast is mentioned in the line above, that leaves only the κεφαλαί, which fit the space perfectly. ἀκάτειος is properly a three-termination adjective, but sometimes, as here, it is treated as if it were only two termination; see also *IG* II² 1612, lines 34, 329; 1613, line 231; 1614, line 146. The older masculine accusative plural ending, -ος, has been used here instead of the later -ους.¹⁴⁹

Line 32: This line may have contained a ship's name or a demotic, as in lines 20 and 29; no restoration is possible.

Lines 33–53: The restorations in this column are based on the lengths of lines 38, 39, and 49, which are certain.

Lines 33–34: Since the ταρβός is always the first piece of equipment entered in the inventories of the 350's, the line before it must have contained the heading for the "wooden equipment"; hence this restoration. See further p. 220 below. Line 34 is restored on the basis of line 22.

Line 35: The κοντοί usually come between the κλιμακίδες and the παραστάται during the 350's; hence this restoration. See *IG* II² 1611, lines 28–41 and 1612, lines 1, 7.

Line 40: During the 350's, the]στδν usually comes between the ὑποζώματα and the τοπεῖα, elements of which fill lines 41–42; compare *IG* II² 1611, lines 298–299, 335–336 and 1612, lines 60–68.

Line 41: For the nominative plural used in place of the accusative plural in third-declension nouns, see Smyth 1956, p. 58, par. 251b.

Line 43: This line starts farther to the right than the other lines in this column because line 23 in Col. II extended into Col. III here.

Line 44: This line seems to have been erased, perhaps after the stone was carved, because the chisel stroke runs over to the end of line 23. Traces of letters seem to be preserved: the bottoms of both verticals of a pi; the top of a triangular letter; bottoms of both diagonals of an alpha; the top of the left vertical and the top rounded portion of a rho; and the bottom of the vertical of an upsilon. These traces suggest the restoration: πα[ρ]αρυ[ματα λευκ]. If this is correct, line 45 should be restored as παραρύ[ματα τριχί and line 43 as ὑπό[βλημα, κατάβλημα].

Line 46: I have restored the anchors as plural because each ship normally carried two. Nothing in this list indicates that this ship is not using the standard equipment.

Line 52: The only possible restoration here is Habronides. Other members of the appropriate social class whose names begin Αβ[–] are too old or too young, with the possible exception of Ἀβρων II Βατῆθεν. This man's daughter was probably married in the 350's, and he is not known to have performed any liturgies;¹⁵⁰ hence Habronides Κο[–] is a better restoration.

Line 53: Of the dotted nu, the junction of the left vertical and diagonal and the top of the right vertical are preserved, of the dotted epsilon, the top of the left vertical and the top horizontal. Possible candidates include Neaios of Ikaria (*PA* 10618), recorded as trierarch in *IG* II² 1622, line 674, Neandros I of Paiania (*PA* 10623), and Neoptolemos of Auridai (*PA* 10649), whose son Charias was recorded as trierarch in *IG* II² 1623, lines 87–96, 105–106, 128–129.¹⁵¹ Neandros is not known to have been a trierarch but is an appropriate age because he was born in 384/3: *IG* II² 1926, line 51. Neoptolemos might be a little old to have been trierarch in the 350's. A fourth candidate, Neokles, is known only from his son's tombstone, and his liturgical standing is ascertained through his daughter's father-in-law.¹⁵²

¹⁴⁹ Threatte 1980, pp. 243–255, 351–352.

¹⁵⁰ Davies 1971, p. 270.

¹⁵¹ Neaios: Davies 1971, p. 398; Neandros: Davies 1971, p. 68; Neoptolemos: Davies 1971, p. 570.

¹⁵² Davies 1971, pp. 291, 398.

Col. II inventoried trierarchs who owed equipment from specific ships. The entries in this inventory are organized by trierarch. If a trierarch owed gear from more than one ship, it is listed under the name of each ship. If ships of several classes were involved, the change in class is also indicated, as is clear from line 13. As was the case with I 7316, the verb is only included after the first ship's name and is not repeated after subsequent ships' names recorded under the same trierarch. The entries were not divided according to the type of equipment, wooden or hanging. This organization is in direct contrast to that of I 7316 (p. 209 above). Col. III appears to have recorded gear on ships at sea when the inventory was made. These entries were recorded by ship rather than by trierarch.

Lines 12–19: The name of the trierarch of this entry is not preserved. He must have been fairly wealthy because he was trierarch on at least four ships, those of lines 14, 16, 18, and the one whose equipment was recorded in line 13. This last vessel was presumably first class because she is followed by the heading ἐπὶ τὰς δευτέρας; for this heading in line 13, see *IG II²* 1611, line 417 and 1612, line 35. The three ships listed after this heading should all be second class. The phrase ὅς ἐπὶ τὴν plus a ship's name, in line 14, is attested twice in the naval inventories: *IG II²* 1612, lines 322, 359. The word περινεως, found in line 17, is only used for oars; no exact parallel exists for this line. For other uses of περινεως, see *IG II²* 1606, lines 6, 43, 57, 67; 1607, lines 9, 14, 16, 22, 23, 55, 58, 84, 97, 125, 136; 1608, lines 40, 51, 60, 72, 82; 1609, line 51. The second-class ship Ἀκρυπτος of line 14 is otherwise unattested. The name is an appropriate one and means not hidden and hence visible. Other ships with similar names include the Δηλιάς, Δῆλος, and Φανερά, whose names all mean visible or manifest. The Εὐπορία included here with equipment owed was also entered as second class in 358/7 (I 2012c, line 67) and in 357/6 (*IG II²* 1611, line 207). The Εὐτυχία, built by Epigenes, was recorded as second class here and in 357/6; see *IG II²* 1611, line 84 and 1613, lines 206–207. In both 357/6 and 356/5, the trierarchs Philinos of Lakiadai and Pheidippos of Xypete owed equipment from this ship: *IG II²* 1611, lines 361ff. and 1612, lines 284ff. In 354/3, she was judged to have been destroyed in winter storms when Epigenes of Kydathenaion and Kallias of Lamptrai were trierarchs (*IG II²* 1613, lines 206ff.).

Lines 20–24: The Ἄνυσις was classified as ἐξάρητος in I 2012c, line 42 (p. 191 above). Debts were owed from previous trierarchies on this ship in 357/6 by Nausikrates of Oinoe (*IG II²* 1611, lines 385ff.), in 356/5 by Kritodemos of Alopeke and Pheidippos, whose deme is not preserved (*IG II²* 1612, lines 311ff.), and here by Philinos of Lakiadai. Philinos (*PA* 14327) performed a voluntary trierarchy on the Ἐως with Demosthenes: *IG II²* 1612, lines 301–302; Demosthenes 21.161. He also performed a trierarchy with Pheidippos of Xypete on the Εὐτυχία: *IG II²* 1611, lines 361–364 and 1612, lines 282–284. This service started in 358/7 and ended in 357/6,¹⁵³ but it was presumably counted towards the year in which it started, while the voluntary command with Demosthenes would have been partially concurrent or in 357/6. If the command of the Ἄνυσις was in the year immediately preceding the inventory, it would have been in 356/5, and the inventory would date to 355/4. Philinos would have had a two-year exemption for the trierarchy on the

¹⁵³ The date is given by *IG II²* 1611, lines 282–284. For a similar trierarchy extending over more than one official year, compare the events described by Apollodoros in [Demosthenes] 50.

Εὐτυχία but not the voluntary one with Demosthenes. This trierarchy is his third known one.¹⁵⁴ The phrase ἀ ἐπὶ τὴν plus a ship's name, found in line 21, occurs elsewhere: see *IG II*² 1612, lines 273, 289, 291, 294, 302, 315, 317, 325, 334, 348, 354, 361, 365, 371, 380.

Lines 25–32: The Φιλωνίκη, inventoried in line 26, was second class in 358/7 and 357/6: *I 2012c*, line 75; *IG II*² 1611, line 433. In 357/6, equipment was owed by a trierarch of Acharnai, whose name is not preserved: *IG II*² 1611, lines 433ff. Another equipment debt is recorded here, owed by Chares of Angele (*PA* 15292). The Ἀταλάντη, mentioned here because Chares owed equipment from her, was also included in the inventory of 356/5, when the trierarchs Ameinon of Eitea and Antiphanes of Anaphlystos were forced to repair her and Chares cannot have been in command of her: *IG II*² 1612, lines 103ff. Chares' only other certain trierarchy was on a ship whose name is not preserved: *IG II*² 1620, lines 16–19.¹⁵⁵ He may also be the trierarch listed only by name, without demotic, in *IG II*² 1609, line 116.¹⁵⁶ Thus Chares performed three certain trierarchies, and possibly a fourth, in addition to being the victorious choregos in the boys' dithyramb at the Thargelia of 344/3: *IG II*² 3068. He also provided two public feasts for the city.¹⁵⁷ This evidence suggests that Chares had considerable wealth and was probably not the first person in his family to be a member of the liturgical class; his father was presumably also of this class.¹⁵⁸

Chares was also active as a general. He may have held a junior command under Timotheos sometime between 377 and 373.¹⁵⁹ He seems to have been general first in 367/6 and again in 366/5, when he was involved with events at Phleious, Oropos, and Corinth.¹⁶⁰ His next appearance is in 361/0 on Korkyra, when he gave support to the revolution of the oligarchs against the demos.¹⁶¹ In 357, Chares commanded a force on Euboea and then was sent to the Chersonese; he was probably general in both 358/7 and 357/6.¹⁶² When the Social War broke out, Chares was sent to Chios, was then active in the north Aegean and present at the Battle of Embata in 356/5, after which he went to Asia Minor in 356/5 and 355/4.¹⁶³ Chares was reelected general for 354/3 and was active at Neapolis.¹⁶⁴ In the following year, he was general again and captured Sestos.¹⁶⁵ In this busy career, it is difficult

¹⁵⁴ For the rest of Philinos' career, see Davies 1971, p. 536.

¹⁵⁵ See also Davies 1971, pp. 568–569.

¹⁵⁶ Parker 1986, pp. 4–5.

¹⁵⁷ Parker 1986, pp. 101–102.

¹⁵⁸ Parker 1986, pp. 3, 101–102. Parker also points out that none of the contemporary orators mention dubious social status or wealth; Parker 1986, pp. 5–6.

¹⁵⁹ Isokrates 15.115–117, 121; Parker 1986, pp. 7–9.

¹⁶⁰ Xenophon, *Hell.* 7.2.17–23, 7.4.1, 4–5; Diodorus Siculus 15.75.3; Parker 1986, pp. 10–14, 153–154, note 35; Develin 1989, pp. 256, 260.

¹⁶¹ Diodorus Siculus 15.95.1–3; Aineias Taktikos 11.13–15; Parker 1986, pp. 15–20; Develin 1989, p. 268. *Contra*: Cargill 1981, pp. 172–176.

¹⁶² Demosthenes 23.173; Parker 1986, pp. 21–23, 168–169, note 68; Develin 1989, pp. 273, 274–275.

¹⁶³ Diodorus Siculus 16.7.2–4, 21.1–4, 22.1–2; Cornelius Nepos, *Chab.* 4.1–3 and *Tim.* 3.1–5; Polyainos 3.9.29; Scholiast to Demosthenes 3.31, 4.19; papyrus fragment, *FGrHist* 105 F4; Parker 1986, pp. 24–34; Develin 1989, pp. 274–275, 278–279, 281–282.

¹⁶⁴ Demosthenes 23.183; Polyainos, 4.2.22; Parker 1986, pp. 34–36; Develin 1989, p. 285.

¹⁶⁵ Diodorus Siculus 16.34.3–4; Frontinus, *Strat.* 3.10.8; Parker 1986, pp. 38–40; Develin 1989, p. 288.

to find room for the two trierarchies listed here in I 7450. It appears that generals were generally not trierarchs.¹⁶⁶ If the years in which Chares was general are eliminated, the possible remaining years are those just before and just after his generalship in 361/0, i.e., 365/4 to 362/1 and 360/59 to 359/8. Probably only one trierarchy was performed in the years 360/59 and 359/8 because there was a two-year exemption from duty immediately after each trierarchy.¹⁶⁷

For the phrase, in line 26, *ὧν ἐπὶ τήν* plus a ship's name, compare *IG II² 1612*, lines 279–280. The abbreviation *ἀκάτε*, in line 30, is attested in *IG II² 1617*, lines 33, 37, 65.

Col. III records equipment by ship rather than by trierarch, as is clear from lines 49–53 and the similar list in *IG II² 1611*, lines 285–373. Complete or almost complete lists of equipment are only given when the gear is listed by ship. The equipment registered in this column seems to be much more complete and is divided into the categories of “wooden” and “hanging gear”, suggesting that this equipment comes from ships that were at sea when this inventory was made. The organization of these entries is as follows: ship's name in nominative, name of the builder, name(s) of the trierarch(s) currently in command, followed by “wooden” then “hanging equipment”. Each line probably contained two pieces of equipment or two words; compare *IG II² 1611*, lines 285–373.

Lines 33–38: The list of “wooden gear”, either *τῶν δὲ ξυλίνων* or *τῶν ξυλίνων ἔχουσι*: For the former, see *IG II² 1605*, line 44; 1609, lines 49, 55, 65, 69, 75, 80, 98, 102, 106, 109, 110; 1627, line 265. For the latter, see *IG II² 1611*, lines 293, 306, 315, 345, 365, 373; 1613, lines 185, 193, 215, 293; 1620, lines 20, 66; 1622, lines 171, 317; I 2542, line 5 (p. 205 above). The latter version is more likely in this case because it is the form found in the 350's.

Lines 39–46: The list of “hanging gear”; compare *IG II² 1611*, lines 297, 309, 320, 334, 350; 1612, lines 59, 275, 297, 306, 330, 337, 368, 375; 1613, lines 187, 196, 220, 232; 1615, line 165; 1620, line 25; 1621, lines 6, 27, 100, 113b; 1622, lines 18, 30, 176; 1631, line 664.

The *ἱμάντες* and the *ἄγκωνα* are both ropes connected with the sail and are normally entered under the term *τοπεῖα*, which seems to be rather general and is often used in a collective sense, as *ταρρός* and *σχονία* were. The word *τοπεῖα* is neuter and is always used in the plural. The *τοπεῖα* ought to have something to do with the sails because the *ἱστίον* and the *τοπεῖα* are regularly listed next to each other.¹⁶⁸ During the decade of the 350's, the *τοπεῖα* clearly included other items. The inventory for 357/6 states that there were eighty-nine *τοπεῖα ἐντελῇ ἐπὶ ναῦς* and in addition one *ἄγκωνα*, two *ἱμάντες*, three *πόδες*, three *ὑπέραι*, one *χαλινός*, and eight *κάλως*;¹⁶⁹ these items were all extra and cannot

¹⁶⁶ Jordan 1975, pp. 117–119 and cf. pp. 134–137. Trierarchies performed by generals do seem to have occurred: Alkibiades seems to have been both trierarch and general in 415, as does Nausikles of Oe sometime before 334/3; cf. Davies 1971, pp. 20, 397. If Chares performed the trierarchies when he was general, an unlikely situation, they could belong to any two years in the 350's.

¹⁶⁷ Isaïos 7.38; Jordan 1975, pp. 91–92.

¹⁶⁸ E.g., *IG II² 1611*, lines 335–336; 1612, lines 276, 349; 1622, lines 177–178, 206, 252. For discussions in secondary literature, see for *τοπεῖα*: Morrison and Williams 1968, pp. 299–301; Casson 1971, pp. 229–235, 259–263; Morrison and Coates 1986, pp. 177–178, 191. For *σχονία*: Morrison and Williams 1968, p. 301; Casson 1971, p. 250.

¹⁶⁹ *IG II² 1611*, lines 53–57.

as a group constitute a single complete τοπεῖα. The inventory for the following year, 356/5, records eighty-nine τοπεῖα ἐντελῇ ἐπὶ ναῦς and, additionally, two ἱμάντες, two πόδες, three ὑέραι, one ἄγκοινα, one χαλινός, and eight κάλως;¹⁷⁰ as with *IG II²* 1611, all these items are extra and do not represent a single full τοπεῖα. At the end of the period covered by the series of inventories, the τοπεῖα again appear with some of the component parts. These τοπεῖα are not for the triereis, which seem to have relatively complete sets at this period,¹⁷¹ but for the tetrereis. The complete τοπεῖα are listed as containing eighteen καλωιδίων μηρύματα, two ἱμάντες, one ἄγκοινα διπλῇ, two πόδες, two ὑέραι, and one χαλινός.¹⁷² The items in this list are the same as those found in the inventories of the 350's, except that the ἄγκοινα has been replaced by an ἄγκοινα διπλῇ and the κάλως by καλωιδίων μηρύματα, which are eighteen in number instead of eight.

A comparison of these two records of the equipment, which comprise the complete τοπεῖα, allows various items of the "running rigging" to be identified.¹⁷³ Perhaps the easiest items to identify are the πόδες, which appear in Homer. These ropes are the sheets which run from the bottom or foot of the sail; πούς has a metaphorical meaning as the foot of anything and hence the ropes from the "foot" of the sail. Since ὑέρ has the meaning "upper" or "above", the braces, which run from the yard and therefore from the upper corners of the sail, must be the ὑέραι. The ἄγκοινα διπλῇ and single ἄγκοινα, from the root ἀγκών, "anything bent", are the halyard, which is bent because it runs from the sail yard to the top of the mast and thence to the deck. The ἄγκοινα διπλῇ occurs only at the end of the 4th century on the tetrereis, which, as heavier ships, ought to have had heavier equipment. The ἄγκοινα διπλῇ, double because it is arranged as a tackle, would make it much easier to move the sail than the single ἄγκοινα. The χαλινός, which has the metaphorical meaning "anything which curbs, restrains, or compels", is the parral; it restrains the yard against the mast. The brails must be the κάλως and their later replacement the καλωιδίων μηρύματα,¹⁷⁴ since κάλως are ropes and used in contexts of letting out and setting sails; these contexts describe clearly how the brails are used. By process of elimination, the lifts must be the ἱμάντες, since there is no other term left.¹⁷⁵ This identification fits the root meaning of ἱμάς, which

¹⁷⁰ *IG II²* 1612, lines 64–68.

¹⁷¹ As at *IG II²* 1627, lines 69–72; 1628, lines 254–265; 1629, lines 379–387. The τοπεῖα are listed as missing only the καλωιδίων μηρύματα, on which see below.

¹⁷² *IG II²* 1627, lines 785–790; compare 1628 (using the numbering of Laing 1968), lines 333–338, 352–356, 371–376 and 1629, lines 456–461.

¹⁷³ On a square sail, which all ancient warships had, the "running rigging" are the ropes needed to manoeuvre the sail. They include the *halyard*, which raises the sail and yard into its place against the mast; the *parral*, which is a collar of twisted rope holding the yard against the mast; the *lifts*, a pair of ropes which run from the ends of the yard to the top of the mast and keep the yard either level or cocked; the *braces*, a pair of ropes which run from the end of the yard to the deck so that the yard may be adjusted horizontally; the *sheets*, a pair of ropes which are attached to the lower corners of the sail and allow the sail to be adjusted; and the *brails*, which are ropes used to haul up the bottom of the sail to adjust, shorten, or furl it and which act very much like the cords on Venetian blinds. See Casson 1966, pp. 51–52; Casson 1971, pp. 229–230, 259–263. The following discussion is greatly indebted to Casson 1966 and Casson 1971, pp. 259–263.

¹⁷⁴ καλώιδιον is the diminutive of κάλως, the most general meaning of which is a rope. καλώιδιον is thus a small rope. μήρυμα means something drawn out, including a strand (of gut) and thread; here it must be a section or piece of rope.

¹⁷⁵ *Contra*: Emanuele 1977, pp. 183–184, where the ἱμάντες are identified as "lashings".

is usually something having to do with a leather strap. The only piece of rigging which could possibly be leather are the ἱμάντες.

Once the “running rigging” of both the trieres and the tetreres is identified, the complete τοπεῖα should also be clear. The complete τοπεῖα for the tetreres is known: eighteen καλωιδίων μηρύματα, two ἱμάντες, one ἄγκοινα διπλῇ, two πόδες, two ὑπέραι, and one χαλινός.¹⁷⁶ The complete τοπεῖα for the trieres should be similar, but at the same time it must include more items than the extra items registered with the τοπεῖα in *IG II²* 1611 and 1612, because otherwise these would be described as ἐντελῇ like the other eighty-nine. A complete τοπεῖα for a trieres included one χαλινός, one ἄγκοινα, two ἱμάντες, two πόδες, two ὑπέραι, and more than eight κάλως.¹⁷⁷ The complete number of κάλως was probably eighteen as on the tetreres, since the two types are not very different in size.

Lines 46–48: The anchors listed here seem to have been assigned to another ship whose name began with alpha, line 47, and is not restorable. The anchors were presumably taken off that ship and used on the one whose equipment is listed here, but they were still entered as part of the gear of the original vessel. The ship A[–] was under the control of a symmory, line 48, restored in the genitive in apposition to the genitive ship’s name. The name of the man in charge of the symmory would have followed the word συμμορίας and is not preserved. The man’s name would also have been in the genitive: see *IG II²* 1615, lines 12, 51, 89, 104, 135; 1617, lines 40–41, 51–52, 61–62; 1618, lines 43, 73, 85, 94, 99, 111, 121; 1619, line 28. The word ἀγκύρας was probably not followed by another word. No exact parallel exists in the naval inventories for lines 46–48.

Lines 49–53: These lines record the next entry. It starts with the ship’s name and her builder, line 49, and continues with the names of the trierarchs in lines 51–53. The lines now lost after line 53 then said either τῶν δὲ ξυλίων or τῶν ξυλίων ἔχουσι, probably the latter, and the record of “wooden” and “hanging equipment” followed as in lines 33–46. For the builder of this ship and this spelling of his name, see *IG II²* 1611, line 328. The Ἔως, inventoried here in line 49, was entered as second class in I 3227, line 4 (p. 184 above). She is also described in *IG II²* 1612, lines 302ff. in connection with the debt of the trierarchs Philinos and Demosthenes. Habronides (*PA* 18) was also a trierarch in the Hellespont in 357/6 on a different ship.¹⁷⁸ The trierarchy recorded here must be on another occasion and in another year, because this section of the inscription records trierarchies performed in the year of the inventory. Since Habronides would have had a two-year exemption after his service in 357/6, the earliest possible year for this inventory is 355/4.¹⁷⁹

CONCLUSIONS

These important inventory fragments have expanded considerably our knowledge of the Athenian navy in the 350’s. They provide parts of inventories from the years 358/7, 355/4, and 354/3. The document represented by I 3227 and I 2012*a–c* clearly dates to the year

¹⁷⁶ See note 172 above.

¹⁷⁷ Cf. *IG II²* 1611, lines 53–57 and 1612, lines 64–68.

¹⁷⁸ *IG II²* 1611, line 325 and 1953, line 6.

¹⁷⁹ For the two-year exemption from duty after a trierarchy, see Isaios 7.38; Jordan 1975, pp. 91–92.

358/7. I 7316 and I 7450 belong to the years 355/4 and 354/3. If the reconstructions given of the careers of Menestheus and Habronides are correct, then I 7316 probably dates from 354/3 and I 7450 from 355/4. The combination of these fragments with *IG II*² 1611, 1612, and 1613/14, dated 357/6, 356/5, and 353/2, respectively, provides us with our largest continuous sequence of naval-inventory fragments.¹⁸⁰ As a result of these dated documents, *IG II*² 1615–1619 must date after the year 353/2 but still probably in the 350's.¹⁸¹

The evidence of I 7316 and I 7450 establish Kallimachos of Anagyrous and Nikias II of Lamptraí as members of the liturgical class in their own right. The general Chares is now known to have been a wealthy man and quite active in the performance of liturgies. I 7316 shows that the family of Perikles continued into the 4th century. The new addition to the family is Perikles IV Cholargeus, the grandson of Perikles II, the illegitimate son of Perikles I and Aspasia. Additional trierarchies in the 350's are now attested for Phrynaios II of Athmonon, Menestheus I of Rhamnous, Philinos I of Lakiadai, and Habronides Ko[–].

The fragments from the Agora also add twelve new ships' names to the extant ones. The new names are the Ἀκρυπτάτη, Ἀκρυπτος, Γοργοφόνος, Δραμοσύνη or Θεαμοσύνη, Ἔρις, Εὐαμερία, Εὐνεως, Ἰφιγένεια, Παγκράτιον, Πάνδημος, Ῥαμνουσιάς, and Φιλήνεμος. These twelve names should be added to the 277 names listed by Schmidt as attested in the Athenian navy during the Classical period.¹⁸² With this total of 289 names, the Ἔορτή and Ἐπινόμη, preserved on *IG I*³ 499, should be included to make a total of 291 attested names. Either the unattested Ῥητή or the unattested Ἀκτὴ might perhaps also have been listed on I 7316. A change must also be made to two restorations in the Corpus based on I 2012c. The ship's name restored as Παγκράτεια at *IG I*³ 500, line 6 and *IG II*² 1612, line 294 must now be changed to Παγκράτιον.

The work on the Agora fragments has required consideration of the equipment listed in the naval inventories. The majority of the definitions of the terms follows the work of other scholars, but several additions have been made. The ταρρός is clearly the complete set of oars assigned to a ship, and the use of the term probably meant that the oar straps were with the oars. The πηδάλια were assigned to a ship when she was still under construction in the shipyard. The term, in the plural, generally means two except in the totals of equipment. By the 330's, the plural is clearly used to indicate a pair. Likewise, the κεραῖαι are listed regularly in the plural, but the term generally means two. This same usage is also found with other pieces of equipment of which two were needed, such as the ladders. The collective terms for "running rigging" and other ropes, τοπεῖα and σχοινία respectively, are used only in the plural, in contrast to the ταρρός, also a collective word, but used in the singular except in the totals of equipment.

¹⁸⁰ *IG II*² 1613 and 1614 were joined by Laing and belong to the same year: Laing 1968, p. 245, note 4. The date of the inventory is given by *IG II*² 1613, lines 153–154, 257.

¹⁸¹ *IG II*² 1615 and 1617–1619 were all associated by Laing, who considered them part of one document: Laing 1968, p. 245, note 4. *IG II*² 1616 is from a different record. All these fragments are dated after 357/6 by the Corpus because of the references to symmories.

¹⁸² Schmidt actually lists 282 names, but two names, the Παγκρατής and Πολυχαρίστη, never existed, and four other names, the Ἀμμωνιάς, Ἀντιγονίς, Δημητριάς, and Πτολεμαίς, are not attested epigraphically. One name, the Ἐλλη, was accidentally omitted. Thus the total number of ships' names in the inventories in his list is 277. See Schmidt 1931, pp. 96–99.

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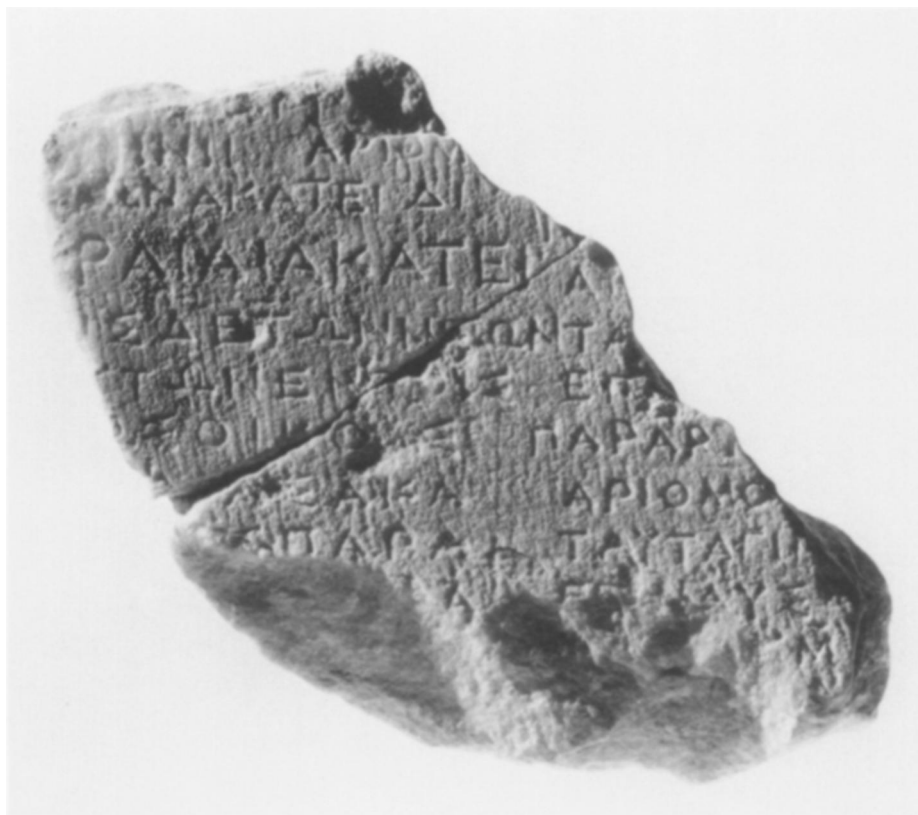
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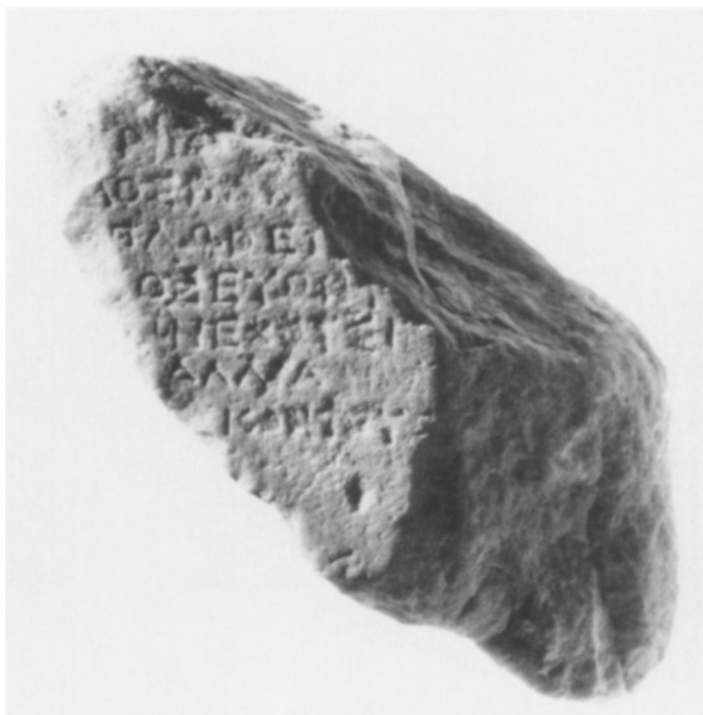
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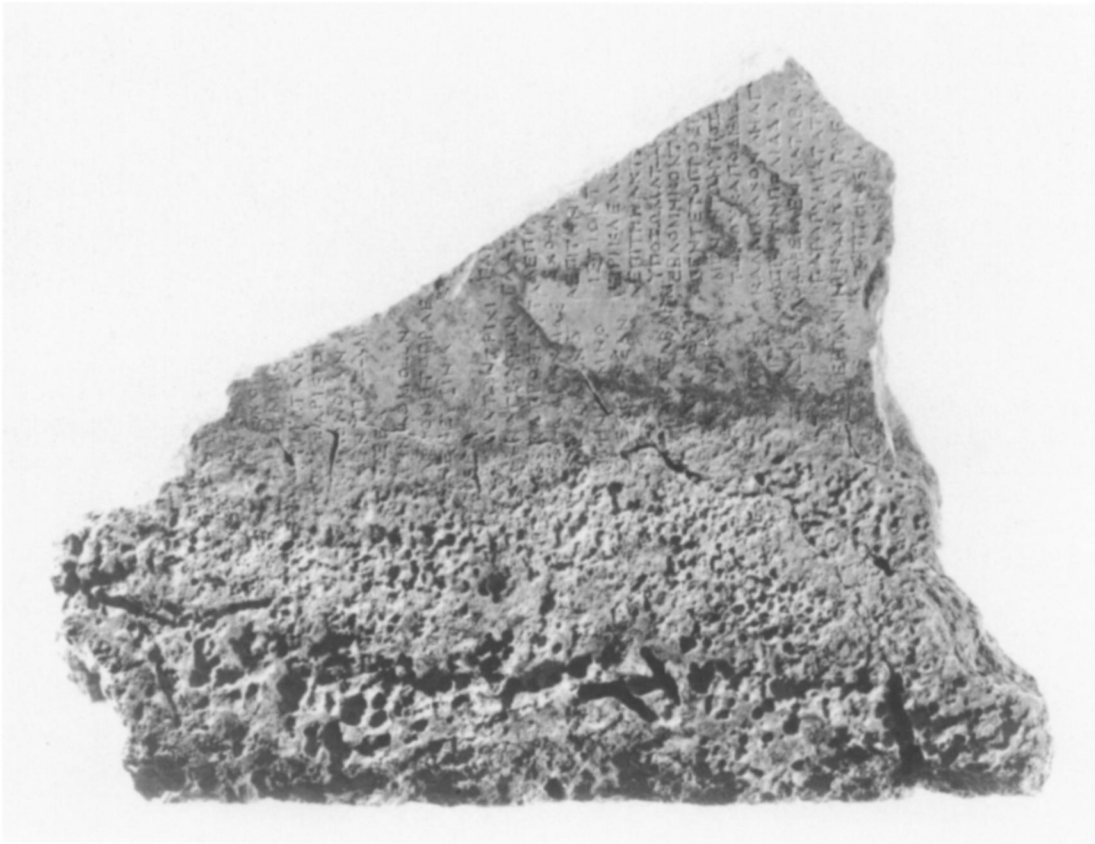
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