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Dear Susan,

Here I will manage to tell you that I am alive, and proposing to consider your interesting problems ΩΣ TAXIETA, but not here, so that Andreas can post this to you this evening, which is a Friday. At the same time I will enclose an index to my Hellenistic Wreck article. I wish I had had it printed, but the article was short, and I did not know M. Empereur was going to index and over-index his own.

I did receive your various missives, but not till I got back heren for the earliest, as perhaps Laura thought a manila envelope signified an offprint; anyhow I could not have replied usefully away from this office. When I opened that envelope, I was discouraged by a great long list of inventory numbers not in numerical order, and not with names attached; there seemed to be such a lot of preliminary work to be done to find out what you wanted. You can imagine that there were other things piled up, from other people.

I will now tell you 1) that, yes, those lists of SAH in various parts of Section K not from the MSBF do probably all give the same mans dates I would now give: they are not in the 5 3rd century. Some might be a little changed of sharpened. But I will go ever your queries and your article's text. I rather hope you have not put it in press yet. 2) SS 13501, with eponym ZHNDAOTOZ and SS 13509, with eponym EPMO@ANTOZ, are both IV B; whereas SS 13502 is probably early IV A. 13502 is a stamp of the HAMAIA GEYARPIAA, who are known in combination with early eponyms of IVA. Use the index of the MSBF article for all this.

More soon. Best to you both.

6.7.87

Notes for Dem Susa) The #. 87 vorsing for article & long-full. P. 1 P23095 is and my basis. Th Junpor uno to show The was othe working Engent swing P23095 an whind at the had be support See ing for 23-24 5 ho and doit cel & a clair, '& is a mild mygerting, what are these LOTS that she report & by mutus. No such mit arigin .

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Jan. 7, 1987 (Su Ku . p. list in MSRF anted)

Miss Virginia Grace American School of Classical Studies 54 Souidias St. GR 106 76 Athens Greece

Dear Miss Grace:

Enclosed is a draft of a short article concerning the Middle Stoa Buildling Fill and long-petal bowls. I sent a copy to you last summer (August 7, according to my records), but since I have heard nothing from you I was worried that it might not have reached you, especially since you were away from Athens at the time. I also left a note for you in Athens, concerning Kleiner's Deposit III and related strata. Let me know if you did not find it on your desk, and I will send you another copy.

QUESTIONS: M_{1} M_{2} M_{3} M_{4} M_{5} M_{5} M

We have just returned from Texas. After the meetings (which were as usual, though terribly complicated by the fact that talks and meetings were spread over three different buildings), we spent a week traveling in south Texas. One highlight was a visit to the Whooping Cranes along the coast, north of Corpus Christi. Another was a 14 mile hike through the Chisos Mountains in Big Bend National Park; the view down to the Rio Grande and to the mountains of Mexico beyond is the only thing I have seen to rival the high peaks of Olympus. The animal life was exciting too. The birds of Texas are proverbial, and we certainly saw our share (including flocks of bluebirds). We also met up with deer, collared peccary, and a very engaging spotted squirrel which we have not yet been able to identify.

We are settled in our new house and enjoy it very much. Commuting to New York is very tiring, but I do it only three or four times a week -- and for the next three weeks, not at all, since it is our winter break. It is wonderful to be so 3.01

near the libraries, and also to see the Thompsons regularly. Bob loves teaching at the University, and there is some chance that he may stay on. The cats are surviving the move, although Kavouri has had a hard time of late, and has suffered from a number of mysterious ailments. At present, however, he seems pretty well, though certainly not the cat he used to be; he is, after all, nearly 15 years old.

All the best to you in 1987. I hope to be in Athens briefly in June, though that is still very tentative. I am taking a leave next year, and in any event will get to Athens in the fall, if not before.

Yours,

Susan

Susan Rotroff

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THE LONG-PETAL BOWL IN THE PITHOS SETTLING BASIN

In a recent issue of Hesperia, Virginia Grace has aroued for a date in the second decade of the second century for the introduction of "early" long-petal bowls.¹ The evidence cited for this early date is P 23095, a long-petal bowl of unusual design which was found to the south of the Middle Stoa, and has been associated, both by the excavator, Eugene Vanderpool, and, on his authority, by Miss Grace, with the construction of the Middle Stoa. In view of the considerable readjustment of the dating of long-petal bowls which Miss Grace's claim suggests, it seems worthwhile to coulinty Unit Den & aller examine the bowl and its context in more detail. P 23095 6 6

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The bowl was found in a pithos that served as a couly end EVEbene settling basin, located along the north side of the "Heliaia," just short of its west end. This feature clearly functioned in concert with the "Heliaia," for a channel to convey a water downpipe was cut into the face of the two surviving blocks of the "Heliaia" wall just above the pithos. It is also clear, as the excavator states, that in order to bring the level of the square south of the Middle Stoa up to the level of the steps of the Stoa itself at its west end, a large amount of fill was brought in, and this fill ultimately covered the pithos and put it out of use.2 A careful investigation of the stratigraphy of this area,

2. See E. Vanderpool's comment quoted in Ibid., p. 22.

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^{1.} Virginia R. Grace, "The Middle Stoa Dated by Amphora Stamps," <u>Hesperia</u> 54, 1985, p. 24.

however, and of the pottery found nearby, suggests that the situation was more complicated than has previously been suggested.

As currently constituted, the strata associated with the construction of the Middle Stoa consist of 1) the fill within the foundations of the building, preserved and excavated primarily within the nine westernmost bays of the structure³ and 2) the fill brought in concurrently with the laying of the Stoa foundation to raise the level of the south square, excavated in a continuous stretch south of the westernmost six bays of the building, and in patches further east.⁴ This southern section of the building fill is considered to extend no further west than a line running south from the first Stoa pier from the west. No clear stratigraphic division was noted during excavation, and it may have been obscured by the fact that the area east of this line was dug in 1953, the area west of it in 1954. In Vanderpool's final analysis of the area, however, the fills west of this line were not considered part of the same leveling operation, but rather related to the creation of a ramp leading up from the level of the street which runs north-south, beyond the west end of the Stoa, to the higher

3. Coins from this fill were published as Deposit I by Fred Kleiner, "The Earliest Athenian New Style Bronze Coins. Some Evidence from the Athenian Agora," <u>Hesperia</u> 44, 1975, pp. 303-309, but note that coins L-410-414 and 417 in fact come from south of the building; this has no bearing, however, on Kleiner's conclusions.

4. <u>Ibid</u>, Deposit II, pp. 309-311. Amphora handles from both inside the building and from the fill to the south form the basis of Grace's analysis as reported in <u>Hesperia</u> 54, 1985, pp. 5-54. 3.04

level of the south square. 5 This fill was noted by Kleiner in his discussion of coins from the Middle Stoa building fill, and a selection of coins from it published as Deposit III.6 These coins come from the following contexts:

Lot K 201-202: a fill originally equated with other fill. further east, as contemporary with building operations, dug in an area from about four to seven or eight meters south of the Middle Stoa, south of the first bay; the associated amphora handles are SS 13398-13429, the latest dating in the period 188-167 B.C.7).

Lot K 203: the lowest part of this fill, with amphora handles SS 13430-13433, 13450-13451, contemporary with handles in the Building Fill proper.

Lot K 205: fill over the ramp leading up from the west road at a point about 11 meters south of the west end of the NB: those were TTB TVB building, with amphora handles SS 13501, placed together w/ 13509.

Lot K 221: fill under the ramp at the same point, with K 206 in the amphora handles SS 13952-13958, also contemporary with handles in the building fill proper.

about them. A fill some 10 meters south of the west end of the building, with amphora handles 13503-13508, 13538-13540; among these is a handle from the early <u>duoviri</u> period (107-

98 B.C.).

Final Excavation Report, Section K, 1954. 5. Kleiner, <u>Hesperia</u> 44, 1975, pp. 311-312. 6. 7. Dates given for amphora handles derive from Grace's analysis (dated August 29, 1959) of handles excavated in section K in 1953 and 1954, from fills which were not considered Middle Stoa Building Fill by the excavator.

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1959 list. Iwould

The later date of this material is attested by the amphora handles; although many are contemporary with handles found in the fill within the foundation of the Middle Stoa, and with handles from fill south of the building further east, there are enough later pieces to suggest that the deposition of this material took place somewhat later. Furthermore, the ramp running up from the west was identified and excavated at other points as well and amphora handles from these areas tell the same story;⁸ a number of handles date later than the building fill, some significantly later.

What is interesting is the relationship of these strata to the pithos settling basin and to the long-petal bowl under consideration (P 23095). Although the notebook account is not as complete as one might wish, it appears that the settling basin was overlaid by a layer described as "Hellenistic fill west of the water basin [=the water clock] and north of the stepped retaining wall [=the north wall of the "Heliaia"]" (lots K 144-146). This was considered part of the building fill, and handles from it are included in

8. The following material comes from under the ramp: Lot K 161, with SS 12924-39 (latest handles in the period 167-146);

Lots K 217-18, with SS 13767-96 (latest handles perhaps slightly later than Middle Stoa building fill);

Lots K 222-23, with SS 13637-49, 13703-15 (latest handles in the period 146-125);

Lot K 208, with SS 13457-13467 (latest handles in the period 167-146);

Lot K 164, with SS 13005-31 (includes a handle of the first century B.C.);

SS 13728-47 (latest handles in the period 188-167) also come from under the ramp.

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Virginia Grace's analysis of amphora handles from the fill;⁹ the bulk of the handles are contemporary with those in the building fill proper, but there is also a Knidian handle of the <u>duoviri</u> period (SS 12918);¹⁰ clearly the area has been disturbed or was deposited considerably later than the building fill proper. In any event, the settling basin too is therefore subject to later disturbance and contamination, and does not provide reliable evidence for the dating of its contents.

p 23095 had been shattered and dispersed before its deposition, as the excavation account attests. Vanderpool describes the situation: "most of the pieces were on top of the sand in the basin, one piece was on the strosis just outside".¹¹ This one piece (actually two small rim fragments) comes, in fact, from a fill specifically disassociated from the building fill by the excavator; it is the fill noted above as lots K 201-202, included by Kleiner with Deposit III, and containing amphora handles of the second quarter of the century. Investigation of the context pottery has turned up more fragments of P 23095: one from fill <u>over</u> the ramp beyond the west end of the "Heliaia", no further than about one meter west of the settling basin, and again in fill not considered by the excavator to be building fill (lot K 142), and another slightly further west, <u>under</u>

9. <u>Hesperia</u> 54, pp. 5-54. — which you have a second second second second second second second second with the eponym Euphragoras, of Grace's period VIB (98-88 B.C.); see Grace, <u>Hesperia</u> 54, 1985, p. 22, n. 57; pp. 31, 35. 11. Ibid., p. 22. 3.07

the surface of the ramp (lot K 218). Earth over the ramp at points 2 meters and 6 meters west of the northwest corner of the "Heliaia" (lots K 216 and 205 respectively) contained stamped amphora handles dating down to 146 B.C. and a fragment of another long-petal bowl (K 4339); earth under the ramp nine meters to the southwest also contained later handles (K 222-223, third quarter of the 2nd century; handles at 26/KG, to 146).

Although the stratigraphic picture of this area is far from clear, it seems certain that grading operations continued well beyond the time when the foundations were laid, and that the settling basin, located about 10 meters distant from the south stylobate of the stoa, remained open during those operations. The context of P 23095 does not, therefore, offer evidence for an early date for the inception of long-petal bowls.

What bearing does this piece have, then, in the dating of long-petal bowls? P 23095 is quite unlike the "normal" long-petal bowls which turn up in deposits of the second half of the second century and in Sullan destruction debris of 86 B.C.¹² In these products of the well established tradition the petals are either contiguous or divided by jewelled lines, their surfaces often (though not always) flat. In P 23095 long petals overlie and alternate with pointed lotus petals, in a scheme which finds parallels in 3.08

^{12.} E.g. H. A. Thompson, "Two Centuries of Hellenistic Pottery," <u>Hesperia</u> 3, 1934, D 39-40, E 74-77; <u>Agora</u> XXII, nos. 321-324, 326-343.

fragments from an undated context in the Kerameikos¹³ and in a moldmade jug from the upper fill of a cistern on the Kolonos Agoraios,¹⁴ a fill which was probably deposited in the second quarter of the second century.¹⁵ As I have pointed out elsewhere,¹⁶ the medallion of P 23095 is closely similar to that of a series of bowl manufactured by Workshop A, an atelier which was functioning in the first quarter of the second century. Numerous pieces from that shop are found in the Middle Stoa Building Fill and roughly contemporary deposits, but we do not know how long the shop continued to function. Its products, however, are rare in deposits dating after the middle of the century, and we must assume that the shop closed, or its products altered radically, some time during the second quarter of the century.

It seems reasonable, as Grace suggests, to see P 23095 as an early version of the long-petal bowl. Edwards has postulated a logical course of stylistic development for long-petal bowls, from more elaborate examples with convex petals to simple bowls with contiguous flat petals,¹⁷ but it has not, thus far, been possible to document this development by the evidence of archaeological context. But

 W. Schwabacher, "Hellenistische Reliefkeramik im Kerameikos," AJA 45, 1941, pl. VII: 7-8.
 S. Rotroff, "Three Cistern Systems on the Kolonos Agoraios," <u>Hesperia</u> 82, no. 79, p. 293, pl. 59.
 The fill contained a Knidian amphora handle dating between 166 and 146 (<u>Ibid</u>., p. 274).
 <u>Ibid</u>., p. 274, pl. 62.
 G. Roger Edwards, <u>Corinth</u> VII:3, <u>Corinthian Hellenistic</u> Pottery (Princeton 1975), pp. 177-178. 3.09

here we have P 23095, with links to a workshop of the first and probably also second quarter of the 2nd century, with a close parallel in a deposit of the second quarter of the second century, and itself associated with a fill of that date. It thus seems reasonable to view this as an early version of the type, though not so early as Grace would maintain.

The final analysis of the building fills of the Middle Stoa, the Stoa of Attalos, and South Stoa II will do much to clarify the early development of the long-petal bowl. Even now it is clear that there was considerable variation in the early years of production. To the one previously recognized example from under to Stoa of Attalos¹⁸ can now be added VG, MSRF, another, ¹⁹ recovered from the pottery tins. Both are fairly delicate, with convex petals outlined by thin ridges; they (Such are quite unlike P 23095, but on the basis of context about contemporary.

> Susan I. Rotroff Hunter College

18. <u>Agora</u> XXII, no. 325; although this comes from the fill over the floor of the Square Peristyle, which underlay the Building Fill of the Stoa, Rhys Townsend, who is at work on the publication of the Square Peristyle and its predecessors, tells me that it comes from an area where there was some mixing of the fills. I am grateful to Rhys for several discussions of the stratigraphy of this building in the summer of 1986, and for the opportunity to examine much of the pottery with him.
19. SA 3413, from lot SA 76, also, according to Townsend,

from an area of the Building Fill of the Square Peristyle where there was possibly some mixing with the fill of the Stoa of Attalos above. 3.10

Box 1359 Classics Dept. Hunter College 695 Park Ave. New York, N.Y. 10021

August 7, 1986

Miss Virginia Grace American School of Classical Studies 54 Souidias St. Athens GR 106 76 GREECE

Dear Miss Grace:

Enclosed is a rough draft of a short article I am preparing for <u>Hesperia</u>; you are one of the people who cares most about the subject, so I woud be very interested to have your reactions. Much of the raw material on which it is based is contained in the note I left you concerning Kleiner's Deposit III and related strata.

For amphora dates, I have used those from your list of 8/29/59 concerning amphora handles from section K excluded from the building fill by the excavator. Are these dates still thought to be correct? I would also like to know about SS 13501 and 13509; in the 1959 list, these were lumped together with SS 13502, which comes from a different context.

I hope your stay in the States was pleasant; things seem to be proceding with our house, and we hope to be able to move in in a couple of weeks. Our apartment is a wilderness of boxes and moving materials -- we look forward to being able to impose order on chaos.

All the best,

Susan

Susan Rotroff

THE LONG-PETAL BOWL IN THE PITHOS SETTLING BASIN

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In a recent issue of <u>Hesperia</u>, Virginia Grace has argued for a date in the second decade of the second century for the introduction of "early" long-petal bowls.¹ The evidence cited for this early date is P 23095, a long-petal bowl of unusual design which was found to the south of the Middle Stoa, and has been associated, both by the excavator, Eugene Vanderpool, and, on his authority, by Miss Grace, with the construction of the Middle Stoa. In view of the considerable readjustment of the dating of long-petal bowls which Miss Grace's claim suggests, it seems worthwhile to examine the bowl and its context in more detail.

The bowl was found in a pithos that served as a settling basin, located along the north side of the "Heliaia," just short of its west end. This feature clearly functioned in concert with the "Heliaia," for a channel to convey a water downpipe was cut into the face of the two surviving blocks of the Heliaia wall just above the pithos. It is also clear, as the excavator states, that in order to bring the level of the square south of the Middle Stoa up to the level of the steps of the Stoa itself at its west end, a large amount of fill was brought in, and this fill ultimately covered the pithos and put it out of use.² A careful investigation of the stratigraphy of this area,

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As currently constituted, the strata associated with the construction of the Middle Stoa consist of 1) the fill within the foundations of the building, preserved and excavated primarily within the 9 westernmost bays of the structure³ and 2) the fill brought in concurrently with the laving of the Stoa foundation to raise the level of the south square, excavated in a continuous stretch south of the westernmost six bays of the building, and in patches further east.⁴ This southern section of the building fill is considered to extend no further west than a line running south from the first Stoa pier from the west. No clear stratigraphic division was noted during excavation, and it may have been obscured by the fact that the area east of this line was dug in 1953, the area west of it in 1954. In Vanderpool's final analysis of the area, however, the fills west of this line were not considered part of the same leveling operation, but rather related to the creation of a ramp leading up from the level of the street which runs north-south, beyond the west end of the Stoa, to the higher

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level of the south square.⁵ This fill was noted by Kleiner in his discussion of coins from the Middle Stoa building fill, and a selection of coins from it published as Deposit III.6 These coins come from the following contexts:

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^{5.} Final Excavation Report, Section K, 1954.

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What is interesting is the relationship of these strata to the pithos settling basin and to the long-petal bowl under consideration (P 23095). Although the notebook account is not as complete as one might wish, it appears that the settling basin was overlaid by a layer described as "Hellenistic fill west of the water basin [=the water clock] and north of the stepped retaining wall [=the north wall of the "Heliaia"]" (lots K 144-146). This was considered part of the building fill, and handles from it included in

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P 23095 had been shattered and dispersed before its deposition, as the excavation account attests. Vanderpool describes the situation: "most of the pieces were on top of the sand in the basin, one piece was on the strosis just outside".¹¹ This one piece (actually two small rim fragments) comes, in fact, from a fill specifically disassociated from the building fill by the excavator; it is the fill noted above as lots K 201-202, included by Kleiner with Deposit III, and containing amphora handles of the second quarter of the century. Investigation of the context pottery has turned up more fragments of P 23095: one from fill <u>over</u> the ramp beyond the west end of the "Heliaia", no further than about one meter west of the settling basin, and again in fill not considered by the excavator to be building fill (lot K 142), and another slightly further west, <u>under</u>

^{9. &}lt;u>Hesperia</u> 54, pp. 5-54.
10. The handle (KT 2112) names Laches and Eupolemos, associated with the eponym Euphragoras, of Grace's period VIB (98-88 B.C.); see Grace, <u>Hesperia</u> 54, 1985, p. 22, n. 57; pp. 31, 35.
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July 25, 1986

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Dear Miss Grace,

I have been going through the notebooks in detail and investigating the contexts within the foundations of the Middle Stoa, primarily those in Section Theta. I would be interested to learn if any of the attached handles (on the sheet of graph paper) date later than 183 or 182. These are handles which have been excluded from the List of Middle Stoa handles; most (but not all) come from disturbed areas, but no more disturbed than many other parts of the fill (where handles <u>are</u> included in the List).

Later in the summer, or in the fall, I hope to send you a the encoulist of handles from contexts within the building which appear, from pottery, coins, stratigraphy, and notebook alons good account, to be wholly free of post-Hellenistic disturbance. The I would be interested to know what date you would give to the latest pieces in that subgroup of the Building Fill.

I have also been investigating the stratigraphy south of the Stoa, particularly the area which has been associated with "later activity". I thought you might be interested in an outline of Kleiner's Deposit III, which seems to be a grab-bag of various strata in that area. I've made a stab at sorting them out into the stratigraphy which EV observed at the time of excavation.

I believe that the infamous pithos/settling basin was covered up in the course of these latest operations, which would run down to the end of the second quarter of the 2nd century. Several more fragments of the bowl have turned up in context pottery from the strata at the west end which have unanimously been associated with later doings. When I get a chance I will write up a note with the details and send you a copy for your information (and comment!).

What a shame that I can stay such a short time and that you are away; I hope to see more of you next summer.

all the best ,

Susan

mulous

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CONTEXTS ASSOCIATED WITH KLEINER; DEPOSIT III

The coins listed by F. Kleiner in his Hesperia article of 1975 under DEPOSIT III were associated with the following contexts.

Hellenistic fill south of Middle Stoa and south of drain C (lot K 201-2); lowest part (lot K 203) Hellenistic fill over Intermediate STrosis at 22/AB

(lot K 205) Cutting Intermediate Strosis at 22/AB (lot K 221)

Hellenistic fill at 20/ ArA(no lot)

The amphora handles associated with these fills are; Lot 201-2 SS 13398-13429 Lot 203 SS 13430-13433, 13450-13451 Lot 205 SS 13501, 13509 Lot 221 SS 13952-13958 Fill at 🗛 SS 13503-13508, 13538-13540

These do not strictly constitute a fill, but rather a collection of strata, located to the south of the extreme west end of the Middle 201-203 is the fill from south of drain C (4 m. south of the south foundation) running south to an unspecified point (perhaps three or four meters south of the drain?), in the area approximately south of the first bay of the Stoa. Note that the same fill dug north of the drain is the Hellenistic fill at 25/MB (lots K 198-200): Kleiner includes these coins in his Deposit II. K 205 comes from over the "Intermediate Strosis", K 221 from under it at the same point. I have not been able to find any notebook account of the fill at 20/^& (a point just east of the south end of the retaining wall that runs south from the SW corner of the

There are, in fact, in this area a series of strata and stroseis, which were located and excavated over a fairly large area, in patches, from the west end of the "Stepped Retaining Wall" (= the "Heliaia") extending to an unspecified distance to the west and to the area south of the steps in the road west of the Middle Stoa.

For relevant contexts (listed by stratum and lot) see next page.

			N		
KLE	INER, DEPOS	IT III (cont)			
THE	FOLLOWING	ARE THE RELEVA	NT LOTS		
1)	Fill over t	he Intermediate	e Strosis		
	Lot 142	SS 13075-83		K-1378 Cinkleiner, de	eposit III)
	160	SS 12920-23		no coins preser	ved
	216	∽SS 13760-66		no coins preser	ved
	206	SS 13502		no coins preser	ved
ę.	205	SS 13501, 13	509	K-1459, K-1460	(Kleiner, deposit III)
	204			no coins preser	ved
	207	SS 13434-49		no coins preser	ved
2)	Fill under	the Intermedia	te Strosis		
	Lot 161	SS 12924-39		no coins preser	ved
	217-18	SS 13767-96		no coins preser	ved
	222-23	SS 13637-49,	13703-15	К-1463, К 1582,	K-1583 by
	221	SS 13952-58		no coins preser	ved
	208	SS 13457-67		no coins preser	ved
	164	SS 13005-31,	(13728 - 47)	no coins preser	ved
	(141?)		Coordinates, under, internedicite Stosis	к-1376, к-1377	Kleiner, deposit I
3)	Fill below	working floor	and over Agora	floor	
	Lot 162	SS 12940		no coins preser	ved
	219	SS 13864-78		no coins preser	ved
	224	SS 13716-22		K-1584 not consu	dired by kiener
	165	SS 13032-37		K-1347 to 1354	
4)	Fill below	Agora floor an	d above bedrocl	< c	

Lot 166		K-1355 to 1361	Keiner, deposit II
163	SS 12941-12946	K-1331, K-1332	not considered
225		K-1585	by kleiner

The Intermediate Strosis was interpreted by the excavator (EV) as a ramp leading up from the lower street level to the west, to the higher level of the South Square at the east. This ramp preceded the steps in the road west of the Middle Stoa, which EV dated to the first century B.C.



6.01

Sept. 20, 1985

Dear Miss Grace:

Your letter just barely reached me in Athens -- it arrived the 24th, and we left the 25th of August. I will, as you requested, make a copy of it and send that copy to you in Athens.

I am very grateful for what work you did have time to do on my manuscript; I did, at least, go through some deposit lists trying to make sure I had talked about handles when they were just handles, and jars or amphoras then they were whole or substantially whole pots. Marian et al seem to feel it is ok as is. To my great surprise and annoyance, however, she tells me that they have still done nothing about the reprint of Homer's "Two-Centuries"; this is particularly vexing because Marian pressed me very hard about turning in a preface to it last October! This does not encourage one to try to meet deadlines.

I am grateful, also, for your comments on the handles from the <u>Bauphasen</u> of the Pergamon Asklepieion. It's particularly useful for my Sardis project. Apparently Gioia de Luca is also doing the Megarian bowls from Pergamon. I visited them this summer (the bowls, not Ms. de Luca) -- a very chaotic and eventful visit, as it turned out. Sardis was great fun, as usual, and even greater fun was my trip to Italy. I rendez-voused

6.02 with Bob and we drove around Tuscany for 10 days, visiting many Etruscan sites (with superb exhibits put together for the year of the Etruscan). We were set upon by gypsy pickpockets (quite a learning experience) in Rome, but that was the only mishap. Reentry into the USA and the teaching year is traumatic, as ever. I like my job, but I don't always respond well to the pressures it puts on me; and, on the whole, I prefer the country to the city, and New York is about as city as you can get. We did have a very pleasant two days on the Jersey Shore, where a friend of my father's has a house (Long Beach Island); I had forgotten how wonderful Atlantic surf is, especially on a hot, muggy day. We also got down to Cape May for some birdwatching -- and have hopes of going back during the hawk migration (from now to the end of October, I'm told).

I hope that your operation went well and that you are now well on the way to recovery -- and I look forward to seeing you in the Summer at the Agora. My plans for next year are a bit nebulous, as I am applying for a Humboldt Fellowship to spend the year in Germany. So I may be spending most of the summer studying German at a Goethe Institute, and put off visits to Greece until later in the year (the Fellowship allows one to spend 6 months in Greece).

au the sest -

Rotroff 520 West 114th St. #53 New York, N.Y. 10025

K.

For your records

7.01 an A. Sust · Jj Jon so. Mar about tell him I got today this letter of Care Mrs. Pris. alle B. Grace August 6, thank on much for 1514 Canton Abr. Millin, Mass. 02186 some news of the island to. I and us & have a KNEE down un, months after the hip by- starting the fine. Dear Suban, I hope you and Bob (did he get them?) on both well and having a good summer -I was von sorry not & to che to de more with the deposits you needed to date this munice. In the and it seemed necessary to check the representers in my article for the Auptrone Colloquine, and I didn't line, time to go for with the deposits. You may see, on the gray wooden boo much to my chain as the Ston, a little hile of propers with scribbles (m Susan, as) did make a start. S got stude on a deprist that had some one-name (ca. pros # 340 BC) Thasian stamps: it seemed as if something might have been worked at by M. Debidows for some of these mances, i.e. something that looked right; but I did not find any thing for the particulus name (or mannes), anytrow in The true I had. I do hope That you need for

dating this DBT dyosils god proformed until us night all have more time. I did chuch the names in the later Porgamon publiestim - the Arsklepiero (?) - That little Appandie (?)) mine, of which I much some any proof, and so it has a lot of typos, Probably then an arm sambble about that publication meant to put together a not for you, i.e. mon fidous nithing on the gray boy. In general, certainly one of more items in that publication are dated by companion with stuff in 14AT Simp FS, -the first is dated on 1968 -Ro of course in stead of putting them meanly 3 rd col. they should be dated, satter, around 240 B.C. I should imagine maybe the war now The in und Asklephen dig kinds of first and that have been lower to the a. 240 B.C. also? as I seen & read the publication (mon-steamps) group B style. I hope This may eatch you still in ACtur, an 5 if not, that it follows you duly. Sorry to miss so much of your stay in Attras. Kado Xzipiowan i

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LONG PETAL BOWLS

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CALLASHAN Erch YFeb 13

University of London

INSTITUTE OF CLASSICAL STUDIES

Bulletin Number 29 (1982)

8.07

ON THE ORIGIN OF THE LONG PETAL BOWL

P.J. Callaghan

In recent years the long neglected field of Hellenistic material culture in the Aegean has begun to receive more attention. This has led to dramatic redating of certain classes of artefacts and the gradual erection of a new chronological framework which is more broadly based than its predecessor.¹ One aspect of my own work has been to harvest this new-found feast of information in order to plot the rapidity with which new ideas could be spread from one area to another. This article is the fifth in a series designed to chart these processes, and to apportion credit where it is due.² It confirms my previous findings which indicated that, in the receptive and eclectic cultural *koine* of the Hellenistic Aegean, there need be very little time lag between the inception of a new idea or motif and its adoption in areas widely separated from its original home.

The American excavations at Corinth have already produced much useful information, and almost every year sees the publication of new material. In 1980 several fills just to the north of the east end of the Hellenistic racecourse were investigated and have now been published in part by Charles Edwards.³ Most of the deposits post-dated the Mummian sack of 146 B.C. and were not sealed.⁴ Nevertheless, Charles Edwards' thorough examination of the Megarian Bowl fragments⁵ found in these soundings has produced some very interesting results indeed. The sherds in question help both to amplify and, in some cases, to modify views put forward by G. Roger Edwards in his monograph on the Hellenistic pottery of Corinth.⁶ As will be seen, the results of the 1980 excavations can also be used to offer comments with wider application for the course of cultural development in the Hellenistic Aegean.

In Corinth VII, iii Roger Edwards suggested that both the Net Pattern Bowl, fig. A, and the Shield Bowl were introduced into the local repertoire only a short time before the Mummian sack, basing this premise on the fact that only a few examples of either type had been found in the city and that the amount of variation within each type was quite small - always a good indication of a short production run.7 The Attic evidence, too, seemed to imply that both patterns were introduced there in the years around 150 B.C.8 I have argued elsewhere that the Shield Bowl was in fact a Corinthian invention: the design was directly inspired by the patterns on Macedonian shields and probably commemorates the taking of Macedonian trophies by the Achaean League in their successful bid to keep Andriskos out of Thessaly in 150 B.C.9 The new Corinthian evidence does nothing to alter this picture. Few new examples of either type were discovered in the fills, and these do little to suggest a wider range of variation in the treatment of each pattern.¹⁰ We might note in particular that none of the more developed Shield Bowls so common on other Hellenistic sites is as yet represented in the local fabric.¹¹ This abrupt cessation of two sequences which began not long before the middle of the second century is significant. It confirms the oft-held view that the local ceramic industry did not survive the Mummian destruction of the city, even though a community of sorts appears to have existed at Corinth between that event and the foundation of the Roman colony in 44 B.C.¹² We may therefore safely postulate that any other fragments in the local fabrics predate 146 B.C.13

If Roger Edwards' comments on the chronology of these two patterns at Corinth have been confirmed, new evidence suggests a revision of his ideas on the Long Petal Bowl, fig. B. This type, too, seemed to be poorly represented among the excavated material at the time he wrote, and again there appeared to be only a small



Fig. A. Net Pattern Bowl



Fig. B. Long Petal Bowl

8.0

amount of variation in the treatment of the motif. He therefore proposed that this pattern was also introduced late in the life of the city, and suggested the years around 150 B.C. as the most likely time for this development.¹⁴ Athens then seemed to have a certain degree of priority in the use of the motif and was identified as the place where it was probably invented.¹⁵

The excavation of a pillared hall west of the South Stoa at Corinth has since produced some evidence that the Long Petal Bowl might have had a longer history of production in the local fabric. This building undoubtedly belonged to the final phase of the city rather than to the squatter occupation after 146 B.C. Not only were fragments of Long Petal Bowls found on its floor, but another had actually been built into its foundations.¹⁶ Since it seemed likely that the hall had been built in response to the final crisis of the Achaean League, and had possibly been used as the headquarters of the Achaean army in the conflict against Rome, the evidence was not quite sufficient to cause any large-scale backward extension of the pattern's history on the site. Charles Williams, however, was moved to raise this as a serious possibility.¹⁷ The 1980 excavations have confirmed his misgivings on the older chronology. They have vastly increased the number of examples now known in the local fabrics, with the pattern accounting for 23 per cent of all Corinthian bowls from the racetrack soundings.¹⁸ At the same time, the number of variations on the theme has increased dramatically, and some of these had a sufficiently long production run for the moulds to have become worn.¹⁹ There can be no question of a local production after 146 B.C., and so it seems likely that we should allow for an earlier introduction of the type than has been supposed hitherto. Charles Edwards estimates an extra decade or so, and raises the possibility of a date as early as ca. 165 B.C.,²⁰ though he admits that the present deposits cannot yet provide a certain date.

In the meantime, work on the Attic deposits has also been proceeding. Susan Rotroff has examined the relevant deposits and concludes that there is no firm evidence for the Long Petal Bowl in Athens before the middle of the second century.²¹ These findings have led both Rotroff and Charles Edwards to reverse the previously accepted direction of influence, and to propose Corinth as the original home of the pattern.²² In the present state of knowledge, Corinth certainly does appear to have a clear edge as regards these two centres alone, but there is equally good evidence for an early production in yet another area, and this has been overlooked by both Rotroff and Edwards. The Greek East, it appears, may very well prove to be the true home of the motif.

Ionia and Mysia both stood under the rule, direct or indirect, of the Attalid dynasty from the Peace of Apamea in 188 B.C. until the extinction of the line and the Roman conquest of 133 B.C. The area included many of the largest and most prosperous of the Greek cities, and the obvious excellence and independence of the East Greek ceramic industry bid us take careful note of its claims in this matter.²³ One deposit in particular has a very important bearing on the question of the earliest Long Petal Bowls. In 1961 a trial excavation at Pergamon was sunk into one of the chambers of the massive foundations for the Great Altar of Zeus on the Acropolis of that city. The fill contained 135 sherds which have been partially published by Jorg-Schäfer.²⁴ Despite this, the deposit has somehow contrived to lose itself in the general literature on the Altar, and has been largely overlooked by students of Hellenistic pottery. This is perhaps partly due to the fact that, in the then state of uncertainty surrounding all Hellenistic pottery, it played a singularly unimportant role in the dating of the monument, partly because there was no absolute date for the inception of the building programme. Proposed construction dates for the Great Altar have ranged from the period soon after the battle of Magnesia in 190 B.C.,²⁵ to the decade between 180-170 B.C.²⁶ The earlier date would make it a victory monument commemorating the defeat of Antiochus III at Magnesia, the later would imply some sort of connection with Eumenes II's other victories against the Bithynians and Gauls at that time. In a recent article I have proposed a slightly later date and identified the Altar as a grandiose memorial to Eumenes' much greater victory over the Gallic invaders in 166 B.C.27 On the grounds of iconography and established Pergamene symbolism, the reliefs decorating the Altar can be much better placed in this period, rather than as monuments of the earlier victories.²⁸ The lower date also allows the Altar to form one facet of a complex propagandist effort on the part of Eumenes which not only sought to underline his military achievements but also exalted the regime at a time when it was under severe pressure due to Roman hostility.29 Far more important in my argument than these general historical considerations was an examination of the published sherds from the 1961 excavations in the Altar's foundations. These included three fragments from Long Petal Bowls which in style corresponded to the earliest groups found at Corinth.³⁰ Seven more fragments from glazed bowls with a net pattern incised on their surface were present in the group.³¹ Thave already discussed this type of decoration and have concluded that the Pergamene pots were close precursors of canonical Net Pattern Bowls. They may even imply the prior existence of the type.³²

The excavated foundation chamber at Pergamon lay close to the centre of the monument, its position and the density of the fill mitigating against any possibility of corruption by later intrusions.³³ Other nearly contemporary deposits from elsewhere in the city tend to confirm its purity and indicate that the juxtaposition of types found under the Altar should be placed within the second quarter of the second century B.C.³⁴ The foundations, massive as they are, must have been completed within a very short time for most of the superstructure to have been completed by the time of Eumenes' death in 159 B.C. A date *ca.* 165 B.C. seems a likely *terminus post quem non* for the material used in the fill of the chambers beneath the Altar proper. This clear stratigraphic evidence suggests the possibility that not only the Long Petal Bowl but also those decorated with net patterns were invented by centres within the Attalid kingdom. The inception of other types may also be attributed to this area,³⁵ a fact which highlights the inventiveness of the potters of Asia Minor.

The "Ionian" bowls found in such numbers on Delos serve only to underline the evidence presented by the Pergamene deposits. The centres of production lay somewhere within the Attalid cultural sphere, 36 and certain developments within the class imply that both the Long Petal and Net Pattern Bowl had a longer history in Asia Minor than can at present be demonstrated for any mainland site. Laumonier has avoided the knotty problem of absolute chronology in his basic work on the subject, though he places all the published examples within the date bracket 166-69 B.C., and has arranged his workshops in a rough stylistic sequence which probably reflects their relative chronological position.³⁷ I have already noted that none of the five "earliest" workshops produced bowls decorated with the shield pattern, and concluded that these ateliers had either gone out of production by about the middle of the second century B.C. - when the type was first introduced at Corinth - or that they ceased to add new designs after that date.³⁸ Three, however, manufactured large numbers of both the Long Petal and the Net Pattern Bowl, and with sufficient variety of treatment to imply a lengthy production run.³⁹ It still seems likely that all the Delian material should be dated from the time of the Athenian cleruchy in 166 B.C., though the moulds were probably used in their home centres before this date. At all events, the earliest workshops may apparently be safely dated within the earliest period of the new settlement and thus supply yet more good evidence for an early production of the relevant bowls in the eastern Aegean.40

What remains, then, is the difficult task of trying to decide between the rival claims of Corinth and the Attalid kingdom to be the true home of the Long Petal Bowl. The probable dates of introduction in both centres are so close that further progress in these enquiries must be hypothetical. A glance at trade patterns, however, seems to establish a balance of probability in favour of East Greece. There is definite evidence for Ionian material arriving at Corinth before the 146 B.C. destruction, but we would seek in vain for any Corinthian pottery in the eastern Aegean.⁴¹ That Ionian ceramics were being brought across the sea in some quantity before the Mummian sack is also indicated by the large number of "Ionian" bowls found on Delos and belonging to Laumonier's five earliest workshops.⁴² As we have already seen, these ateliers also imply that the two earliest varieties of Roger Edwards' Linear Bowl complex were introduced almost simultaneously in the East, whereas the mainland evidence indicates that they were adopted only in piecemeal fashion by the Greek cities there.43 Taken together, these arguments strongly suggest that the technological advance whereby linear patterns incised directly into the mould in part superseded the more laborious system of impressing individual stamps into the matrix was an East Greek invention. Like most short cuts in industry, this device not only saved time and labour, but may also have been connected with the desire to exploit a mass market. It was thus not merely a product of laziness, but a reflection of sound business acumen. In this light it is instructive to contrast the widespread dispersal of Ionian pottery with the more parochial market enjoyed by the Corinthian potters.44

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In conclusion, we might date the introduction of both the Long Petal Bowl and the Net Pattern Bowl to the period slightly before 165 B.C., and identify the original centres of production as the Greek cities lying within the Attalid kingdom. The first of these types was swiftly adopted by Corinthian potters; the Net Pattern Bowl followed some little time later. Athens lagged rather badly behind, a fact which might either indicate a degree of conservatism on the part of its potters or, more likely, that it played little part in the particular trade network which provided the Corinthians with their models.

If Corinth played a passive role in the original exchange, it was nevertheless an important one. The adoption of Ionian patterns throughout mainland Greece could very well be due to secondary dissemination, with Corinthian potters as the intermediaries. Certainly the successful transmission of these early patterns to the other Greek cities at a time when Corinth was a major centre of commerce contrasts markedly with the failure of other Ionian motifs to secure a foothold in the west after 146 B.C.⁴⁵ Delos was as great an entrepot, perhaps, but had no pottery industry of its own to aid in spreading any new ideas, and its position after the sack of Corinth was always that of a receiver. Nor was Corinth always a borrower. The invention of the Shield Bowl may still be assigned there with some degree of probability, and this type eventually found its way to Ionia and was copied there. By that time, however, Corinth itself was little but a field of ruins, and so this small drinking vessel proved to be the last monument to its ancient and distinguished role as a major Aegean ceramic centre.

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NOTES

This study was carried out during my term as Sir James Knott Research Fellow in the Department of Classics at the University of Newcastle upon Tyne.

- For pottery and glass: AJA 84 (1980) 228-9; 85 (1981) 215-6; AM 85 (1970) 129-196; 89 (1974) 193-203; Agora 22 passim; BSA 75 (1980) 33-47 among many others. For monumental painting: BSA 75 46 f.; Alessandria e il mondo ellenistico, Festschrift A. Adriani: "Knossian artists and Ptolemaic Alexandria" (forthcoming). For sculpture: BSA 76 (1981) 59-70; BICS 28 (1981) 115-121.
- 2. The others, in order of writing: AAA 11 (1978) 53-60; BSA 75 (1980) 33-47; "Knossian Artists and Ptolemaic Alexandria" (n. 1); BSA 76 (1981) 59-70.
- 3. Hesperia 50 (1981) 189-210.
- 4. *Ibid* 189.
- 5. Ibid 190-210.
- 6. G.R. Edwards, The Hellenistic Pottery, Corinth VII, iii.
- 7. Ibid 175 ff.
- 8. Hesperia 3 (1934) 369 ff.
- 9. AAA 11 (1979) 53-60.
- 10. Hesperia 50 (1981) 190 and fig. 1, 197.
- 11. The general tendency, once the pattern had been adopted by the coroplasts, was for the rows of bosses to multiply and fill up all the available space between the groups of pendent semicircles. We can follow this progression quite clearly in *Délos* xxxi. Early types, such as no. 9321 and 4303 on pl. 45, give way to examples such as no. 4300 on pl. 84, and 4332 on pl. 112.
- 12. Hesperia 47 (1978) 21-23; 50 (1981) 198f.
- 13. Corinth VII, iii passim; Hesperia 50 (1981) 193.
- 14. Corinth VII, iii 176f.
- 15. Ibid 177.
- 16. Hesperia 46 (1977) 53-58, especially 57 f.

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- 17. Ibid 58.
- 18. Hesperia 50 (1981) 191.
- 19. Ibid.
- 20. Ibid.
- 21. Current Anthropology 19 (1978) 386 f.; Agora XXII 109 f.
- 22. Hesperia 50 (1981) 193; Current Anthropology 19 (1978) 387.
- 23. Jörg Schäfer, Hellenistische Keramik aus Pergamon, Pergamenische Forschungen II (Berlin 1968). East Greek pottery of the Hellenistic period has been found over much of the Aegean, in Egypt, the Near East, the Adriatic, the Black Sea and in the Western Mediterranean. For the spread of East Greek Megarian Bowls alone, see Délos XXXI 3f.
- 24. Schäfer (n. 23) 26.
- 25. The basic argument is to be found in H. Kaehler, Der Grosse Fries von Pergamon (Berlin 1948) 144 ff., recently accepted by A.F. Stewart, Attika (London 1979) 23.
- 26. H. Berve et al., Greek Temples, Theatres and Shrines (New York 1962) 486; M. Bieber, The Sculpture of the Hellenistic Age (New York 1961) 113; R. Martin and J. Charbonneaux, Hellenistic Art (London 1973) 265 ff. and the chronological chart under ca. 175 B.C.
- 27. BICS 28 (1981) 115-121.
- 28. Ibid, especially n. 51. From the time of the battle of the Kaikos in the reign of Attalos I, the Gauls in Asia Minor were identified by the Attalids with the Persian invaders of Greece in the fifth century B.C. The Gigantomachy had already been used with great effect as a paradigm for their victories on the eastern metopes of the Parthenon. Stewart (n. 25) 20, points out the significance of the cluster of Attalid monuments just below and in front of the Parthenon sculptures. This small votive group combined unambiguously defeated Persians, Giants and Gauls in a single political statement representing Pergamene victories over the Asiatic Gauls. It would be strange indeed if this established Attalid iconographic equation of the later third century B.C. should suddenly be pressed into service for the glorification of a victory over a fellow Greek monarch only a generation thereafter. Even his enemies could not but admit that Antiochus was a "Macedonian" ruling a large collection of impeccably Greek cities, which provided the nucleus of his armed forces. There is absolutely no evidence that he was ever identified with the Persian Great Kings whose military exploits had proved such a threat to the cause of Hellenism in the fifth century.
- 29. BICS 28 (1981) 118.
- 30. Schäfer (n. 23) Pl. 19: Z108 and Z126-7; Corinth VII, iii 176-8.
- 31. Schäfer (n. 23) Pl. 20.
- 32. BICS 28 (1981) 117.
- 33. Schäfer (n. 23) 26 and Pl. I, 2 for the position of the sondage.
- 34. BICS 28 (1981) 117 and notes 29-32 for bibliography.
- 35. BSA 75 (1980) 42 f. for the Laurel Trefoil Bowl and the Ivy Bowl.
- 36. Délos XXXI, 3.
- 37. Ibid passim.
- 38. BSA 75 (1980) 42 and n. 56.
- 39. Délos XXXI, Plates I, 29. The two smaller collections within the earliest five groups the workshops of the "Belles Meduses" and "Vases Gris" – do not include any Net Pattern Bowls, a factor which may well be due to the small number of vases which can as yet be assigned to them.
- 40. For the chronology, see Délos XXXI, 7-13.
- 41. For an East Greek Amphora from Corinth, see Schäfer (n. 23) Plate 3 no. 4.
- 42. Délos XXXI, 21-109.
- 43. Hesperia 50 (1981) 189-210; AAA 11 (1978) 53-60.
- 44. For the trade networks in regard to Megarian Bowls at Corinth, see Hesperia 50 (1981) 205.
- 45. Neither the Ivy Bowl nor the Trefoil Laurel Bowl, so common in the East Greek assemblages and on Delos, ever found a firm foothold in the mainland. This, despite the fact that large numbers of East Greek bowls have been discovered at Corinth – probably representing a squatter occupation on the site after 146 B.C. See *Hesperia* 50 (1981) 198-9 and 205.

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Notes on VRG's article, Pharnakes' Stoa Aug. 13, 1981

Footnote 11: The quoted phrase occurs on my p. 102. (Aqua XXII) Footnote 47: Deposit I 14:2 is discussed on my p. 102.

Footnote #2x 49: The long-petal bowl fragment P 20204 is my no. 325

21: The long-petal bowl from the settling Pages 18-19, basin I 14:2 (P 23095, now mended together with P 23766) is my no. 344. I believe, on the basis of the medallion, that this is a product of Workshop A, which functioned in the last quarter of the 3rd century and 1st quarter of the 2nd century. On page 36 I say "It closely resembles a long-petal bowl, although the medallion, an eight-petaled rosette, is also found on figured bowls produced by Workshop A in the late 3rd and early 2nd centuries. The decorative scheme is not far removed from the tall overlapping petals of 23 or the alternating petals and serrated leaves of 54. The context of 344 is, unfortunately, inconclusive, since it was found together with a small deposit of nondescript pottery in a settling basin in front of the Heliaia, a deposit which may have remained open until about 140 (1 14.5). Allows, 344 may been classed here with long-petal bowls, 344 may in fact be more closely related to and contemporary open until about 140 (I 14:2). Although it has many to behad U

About the date of long-petal bowls I say (after discussing much of the same evidence that you discuss): 'This seems to me to indicate that the type is unlikely to have been manufactured in Athens until a few years after the middle of the 2nd century, and this is the date that I have used throughout this volume. In the light of the somewhat ambiguous evidence cited above, howeverk that date must be considered approximate, and the possibility that it should be pushed back by some fifteen years or so should be left open."

> at. m. P 14330 & mrt 50 Not in my catalogue (SIR)

S. I. Rotriff, The Altreen Agne V. KXII, Hellemoter Pelley: Altrenia and Imported Moldmede Brooks, Princeton (in press).

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4. m. .81 14 charles F. ; hong - polal bout 201 pp 1,5 Charles Rowneds, " Carinte 1980: montal Relig Boots" putting in Hesper, He luds mit mo. note 20 als S. P. Dolly, "Hell, Alim Polly; "Myn Bold," Current Aultroplage, 19, 1978, p. 387. She is and as suggesting that The miling long piles bout "may first have be produced to longel " and was and later of a Allen mitel digety las.

On long-pelol fr. possibly fro MSBF SRE, Heg. Supple. X, p. 90, ust 12, p.91 with 14 and P 21048, 22858, and 23095. The fords 2 on undert on the P can't "out", presum by by S. Rotag?. The Cast dem is to on in the settling toam, which is S, R. 's # 343 01 344. On P cant of 22858, S.R. (?) seam 8 exclude This ten for to MSBF because 35 1/826 was found in the sam (on an associated?) place. SS 11826 is on of the time register by man of ca 100 BS



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Rotroff

PARTY CONTRACTOR

I 14:2 Pithos settling basin

2nd century?

171

Fill of pithos which served as settling basin in front of west end for of north side of Heliaia. Basin probably covered during final phases of construction at west end of Middle Stoa. Architecture of west end of Stoa for suggests it was finished later than rest of building; this later building activity has been associated with Hellenistic fill south of Middle Stoa (Kleiner I, pp. 311-313, deposit III: H-I 14:1) in which one of three stamped amphora handles dates in third quarter of 2nd century (Knidian eponym Philippos: KT 1735: SS 13540). Analysis of amphora handles from Erri Pixing Division building fill of Stoa, however, shows no chronological difference between Karlow those from west end and those from elsewhere in the fill. Pottery from Pulsion and the settling basin nondescript. Single bowl is unusual type which may be early form of long-petal, but also resembles imbricate bowls of ca. 200.

#344. = K 2705 = P 23095

I 16:5 Cistern Single Knidian stamped amphora handle dates around 108 (<u>Hesperia</u> 3, 1934, p. 274, no. 218: SS). Tyrkish pottery indicates disturbance. # 165

Agora IV.

L 17:7 Cistern 3rd and early 4th quarter of 3rd century

Cistern with little pottery. Severn stamped amphora handles; Rhodian eponyms date in 3rd quarter of 3rd century (eponyms Aglokritos, Pausanias(?): SS 14279, SS 14282). Latest coin dates in 1st third of 3rd century. One small fragment of moldmade bowl of undetermined type.

Agora XII.

Mis Grace -These are the pages from Susan's dissentation on the chronology of the long retal bowlo -Fortnote 172 lists these bowls that came

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26. 7. 81 sec- d T18.02 Mis Grace -Thise are the poses from susan's dissertation On the chronology of the long petrel bowlo fortnote 172 lists those bowls that came from pre 150 centexts. There is one from the Stong A Halas building fill!

Charles

Sullan debris that was not deposited until around 50 B.C. It seems then that Apollodoros was active in the early first century before Christ. It is interesting that these are among the finest of the long-petal bowls, with regularly spaced, often well-shaped petals. This indicates that quality did not necessarily decline with the passage of time.

Two other bowls are signed (# 324, 3,2), but the signatures are illegible, and no workshop can be grouped around them.

Chronology

Long-petal bowls become common in the second half of the second century. Fragments occur in earlier deposits, but these fragments are small, and the deposits disturbed or, at best, not closely dated.¹⁷² Substantially whole long-petal bowls do not occur in contexts earlier than the third quarter of the second century, when they become more common than other types of bowls.

The best evidence for the date of the inception of this type is still their occurrence in some quantity at Corinth, which was destroyed by Mummius in 146 B.C. and remained deserted until 44 B.C.¹⁷³ This evidence is reinforced by that of the Hellenistic stoas in Athens. Only a few fragments from disturbed contexts at the west end of the building appear in the construction fill of the Middle Stoa, dated by stamped amphora handles no later than 183-182 B.C. None "With at all were found in the fill of the Stoa of Attalos, about With contemporary with the destruction of Corinth. It should be

18.04

noted however that one fragment was found in the fill over the floor of the Square Building (Q 8-9 in Chapter III), (G 200 B K which lay <u>under</u> the Stoa of Attalos building fill. Several fragments appear in the construction fill of South Stoa II, which is, on the basis of the coins and stamped amphora handles, slightly later than the Stoa of Attalos, perhaps dating around 140 B.C.¹⁷⁴ Thompson's conclusion is still valid; the manufacture of long petal bowls began around the middle of the second century.¹⁷⁵

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One would have expected more long-petal bowls in the fills of the Stoa of Attalos and South Stoa II, which are roughly contemporary with the destruction of Corinth. The Corinthian deposits however represent destruction debris, and as such contain much newly broken pottery. The building fills on the other hand contain mostly older material, since no such disaster had befallen Athens. Thus the material at Corinth represents pottery actually in use in 146 B.C., while the building fills at Athens contain only a few newly broken pots. We have no evidence for where production of long-petal bowls first began. It is possible their manufacture began earlier at Corinth, or even originated there, and was not taken up in Athens until slightly later.

There are fragments of about two hundred and twentyfive long-petal bowls from dated contexts in the Agora. They account for over half the bowls in most contexts of the second half of the second century, and are almost the only bowls found in Sullan destruction deposits of 86 B.C.

70

The manufacture of Megarian bowls, long-petal and other types as well, probably did not survive much after the Sullan destruction; few bowls occur in deposits containing coins and stamped amphora handles dating later than 86 B.C. There are however a few fragments of footed long-petal bowls from early Roman contexts (e.g. # 408), which were glazed with green lead glaze. This technique of glazing is thought to have begun in the Augustan period or slightly earlier.¹⁷⁶ Apparently some moulds were preserved, and sporadic use was made of them. Megarian bowls do not occur together with Arretine pottery at the Agora; production must have stopped completely by the end of the first century before Christ.

Other Types of Megarian Bowls

The Agora collection preserves examples of four other systems of decoration on Megarian bowls, all of them linear in nature. They are the "lotus calyx bowls", decorated with a simplified leaf calyx; "Macedonian" bowls, embellished with concentric circles and semicircles; bowls covered with polygonal networks; and daisy bowls, decorated with interlocking daisies or stars.

Lotus Calyx Bowls 177

The Agora collection includes fragments of six bowls (# 358-361) and one mould (# 362) decorated with a combination of lotus calyx and imbricate leaves. These are very fragmentary. The only medallion preserved (# 360) is a rosette.

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- 345
- 176. A number of these bowls found in the Kerameikos were published by Schwabacher as bowls of the workshop of Ariston (Schwabacher, p. 222, pl. 9, A, 1-8). They are similar to Edwards' "linear leaf bowls" (Corinth, VII(3), p. 184, nos. 933-937).
- 177. Courby, pl. 9, f.
- 178. Agora, IV, nos. 686, 688-689, 850-851; Thompson, f1g. 99, E 106.
- 179. Corinth, VII(3), pp. 175, 184.
- 180. Zahn, Studien zur Vor und Fruhgeschichte, pp. 49-51.
- 181. As Hellström points out, "The fact that the prototype, the widespread bronze shield, was of M cedonian origin, has not the slightest bearing on the problem of where the bowls were made." (<u>Labraunda</u>, II(1), p. 22)
- 182. Thompson, p. 442, figs. 95, a, b, E 78.
- 183. Corinth, VII(3), pp. 182-184.
- 184. <u>Labraunda</u>, II(1), pl. 11, no. 155; <u>Corinth</u>, VII(3), pp. 179-181, nos. 908-920; <u>Tarsus</u>, I, pl. 131, no. 180; Zahn, <u>Jahrb</u>., XXIII, 1908, pp. 64-65, nos. 25-26. The decoration also appears on a glass bowl from Gordion, von Saldern, <u>J.G.S.</u>, I, 1959, pp. 45-46, fig. 31.
- 185. Thompson, pp. 381-383, figs. 69, a, b, D 38. Edwards however now dates the "net pattern" bowls of Corinth to 160-146 B.C. (<u>Corinth</u>, VII(3), p. 179).
- 186. Schwabacher, pl. 9, A, 9-10.
- 187. Thompson, fig. 49, C 44.
- 188. Agora, IV, pp. 162-163, note 145.
- 189. Ibid., p. 162, nos. 638, 862-863.
- 190. Ibid., p. 4.
- 191. Courby, p. 331.
- 192. Agora, IV, nos. 698-699, 702, 719, 843-846.
- 193. For lamps see <u>Ibid</u>., nos. 686, 688-689, 850-851; and Thompson, fig. 99, E 106. For the guttus see Watzinger, p. 69, no. 4, where the name is given as Aίωνος . I have not been able to examine the vase, but probably the addition of handle and spout have obscured the letters or and ρ, and the name should be restored 'Alplilor) ωνος.

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if actually you are thoroughly convinced. It might be better not to be too dogmatic, at least and leave yourself room to reconsider. At present I am noticing that in several of those deposits in which long-petals are associated with other material apparently of the 1/2 of the 2nd, the Knidian indicate a date close to the <u>beginning</u> of the period of phrourarchoi, i.e. I would say still in the <u>first</u> quarter of the 2nd. Thus the Peiraeus cistern, also E 15 : 4; EXH6 : 1 and 2 are mostly like that, although there is the one later Knidian. So I would suggest a vogue for long-petals around 180 or a little earlier, and then again in the 2/2 of the century.

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vited in the article on desund, the definite if actually you are thoroughly convinced. It might be better not to be too dogmatic, at least and leave yourself room to reconsider. At present I am noticing that in several of those deposits in which long-petals are associated with other material apparently of the 1/2 of the 2nd, the Knidian indicate a date close to the beginning of the period of phrourarchoi, i.e. I would say still in the first quarter of the 2nd. Thus the Peiraeus cistern, also E 15 : 4; EX16 : 1 and 2 are mostly like that, although there is the one later Knidian. So I would suggest a vogue for long-petals around 180 or a little earlier, and then again in the 2/2 of the century.

27. 5.81 19.02

Early ent of long- peter bowls Discussing deposito with S. Rotuff, I list been totherd in sword cases by late date she gne I son deposite with stamps that won us aster an stude to wise I long here pioni a agreen I, Su alterted prom of hypsicht (anon app) of 16. VI. 80. Of The date of don & 188 include on not much later, works, this wo can accept those pion is to setting basis they E. V. was so sur morted to doset date for to MSBE, and which I think S.R. is discussing as for a disturbed " ares. Fitt. SI No, she has the sprint, as a voy raily upp, and to ded with inbrieding bouls Testing - on brown day before - tall with Charles Etwarts who alling working on sulpting In hubint "top to C. William on the presure of long-pelilles frags. in Country, when suddenly que a lot of bits have ourfaced, and C.E. Clinthe probably they required white tures up bapa

20,01 10. 54.56 LATE DATE IF MSBE 22.14.61 Long-petalled bowls seen (GRE Lita) (fairly commen) in HAT Showly D (early ? 3/4 2ml). and ust in group C Position of P 23095 (K 2705): (MSBE pourd ??). long - public Mig. bool of early character datable in 150 BC 20. 77.59: Its grid position seems to be (q. K section plan); 30/1A Section K Summany J1953, p. 4: "This was found in th selling basin in front of the west and of the Stepped Relaining Wall, not in The grand filling, it may be below than most of the things in the ground filling, for the selling basis seems & how been in use right down & th ling the folling; the bowle K 2705, P 23095 may Anyon to a strictly contemporary proce the got ait the settling basin in the last days of its spiraline should befor the ground filling started." (Then were two settling besins, and which was cataloguel: K 2737, P 23105, a Corafin (2) ja, visible in plate K p: 2153, This on was to East of Water Basi (Note it had been mended.)) Note to "water basin" mentioned in finding. places (e.g. of 5> 12449 - 81) is to Water Clock with the setting tain The on in which & 2705 uses formed was " a chang fullion set in the bedurch," drawn p. 2122 in relation & St. R.I. W. Stisk w of Waln Barn, see phot K p. 2126, meanly of Wand of ST. R. W. manly at w and of wall. (000) Tan grid portion works out as an 31/AB Sterring K Jal

20.02

Nearby gells i " Nordr.B. (2 Paris ga.VI) 12635-61) 12637-729 " " " " " " " " Ngar, B., Golow Flood (C.S. starp) 12755-804 " Below toll Dr.B 12805-12919 28/AF. Hue. fill w g ws. Bes, (55 12918, during 5 th to fill w g ws. Bes, (55 12918, during 5 th to fill world Str. 7 23. VT. 85 Strang it is w g water Bessing - Yeo, but not work 1 Note that forguent F 23095 - Convertibles 16.7.61 plastered into on bood with the fragments from same mould" P 23766. A propile tion condently ben drawn (PD # 1091-50). Finding-plan of P 23766: K, Hell. fiel south of Middle Stor and south of Prain (." From This, 3 Kinding late the MSBF: 23151.88 35 13413 (K2877) (188-166) Vg urtus of 13415 bypen 150 (23. VI. 58) chech > needing - dates 13418 2nd 1/4 prob. Got them out lately to discuss with J. Scharger, is connection with polling from his moestigation of the Altary of Pergania, In that fill, Ended waters Ilis, combined restand broad is stored where in STASE 156-1. 28. TREE meles mityger studying Meg. Brush for Ereling - for Peircens cister dug in 1965, lus studies to anti-P. 23095 - P 23766 . She date in 7/4, we late,

Date of construction of Middle Stoa

9 July 56

VG:

Upon further discussion, it has become apparent that the date of the long-petal Megarian bowl (P 23095 and P 23766) is regarded as crucial for the date of the beginning of construction of the Middle Stea. Its archaeological relation to the beginning of construction cannot be impeached, which is more than can be said for any other object in the lists of MSBF.

In your studies I suggest that it would be most unwise to consider the MSBF as a fixed group with a lower limit of ca. 175 B.C., as you have suggested. I do not now see my way to dating this bowl any earlier than in the vicinity of 150. If I eventually do **see** change my opinion on the matter I will gladly let you know. I will certainly keep your views in mind.

21

The following, at the request of HAT:

I have had two conversations with EV on the subject of the circumstances of finding of the long-petalled Megarian bowl composed of the fragments catalogued as P 23095 and 23766 and of its significance for the date of the construction of the Midtle Stoa. He informed me that he regarded the context as undisturbed and that the bowl should be regarded as certain, contemporary evidence for the date of construction of the Stoa.

[1956?]

MSBF

22

The date of the beginning of this type of bowl, which is an early, fresh example, has been placed ca. 150 B.C. on the basis of evidence from the Stoa of Attalos and from Corinth. We may also cite now <u>Tarsus</u> I, pp. 164-65. I do not now see reason to push back the date of the beginning of the type appreciably before the middle of the 2nd century B.C. If on further study I see reason to change this view I will gladly communicate my opinion.

GRE

17 April 56

EV has suggested to me that a settling basin in front of the stepped retaining wall between the West Fountain House and the south foundations of the Middle Stoa went out of use at the time of the construction of the Middle Stoa. I have forgotten the details, but I think the notion is that the area here would have been filled in to make it level with the floor of the Middle Stoa and form a terrace behind the Stoa. The material from the settling basin includes the following:

P 23095 Meg. bowl, earliest type long petals

P 23096 Lid of cooking pot

and storage material in K, Box 155.

As far as I am concerned I don't think we can push the date of the Meg. bowl back beyond 150. The final filling in of the area to conform in level with that of the Middle Stoa would, I suppose, be one of the last operations. Presumably the construction of the building would have required some years before this stage was reached, so that material within the foundations proper (MSBF) may have been placed there a few years before the Meg. bowl got into the settling basin. One might tentatively think of the years 160-150 for the period of construction of the building proper.

16. 71.56 (See Section K. Summer for 1953, p.4, Ep. a. The stepped Retaining wall is widenty the N would of the Heliais (?) : an Happen Toxist, p. 36, top. Doamstrucker out of the Settling Boin is part of the Walk Clock (?), of. los. al. p. 37 (No.)

VG:

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THE LONG-PETAL BOWL FROM THE PITHOS SETTLING BASIN

fills west of this line were not considered part of the same leveling operation but related instead to the creation of a ramp leading up to the south square from the north-south street beyond the west end of the Stoa.⁶

This western fill was noted by Kleiner in his discussion of coins from the Middle Stoa building fill, and a selection of coins from it was published as his Deposit III.7 He included coins from some, but not all, strata excavated south of the western end of the building, but his list of contexts was compiled with the assistance of the excavator and provides a good starting point for the investigation of the western fills as a whole. The coins come from the following contexts:

Lots K 201, 202: originally equated with building fill dug further to the east, but in the excavator's final analysis excluded from Stoa building fill proper. It was dug in an area from about four to seven or eight meters south of the Middle Stoa, south of the first bay; the associated amphora handles are SS 13398-13429, the Post-MSBF : 55 13413-414, only TVA latest dating in the period 188-167 B.C.8

Lot K 203: the lowest part of the fill described above, with amphora handles SS Core MSBC-13430-13433, 13450, and 13451, contemporary with handles in the building fill proper.

Lot K 205: fill over the ramp leading up from the west road at a point about 11 meters south of the west end of the building, with amphora handles SS 13501 and (Erpis darin 13509, dating ca. 167-146.

> Lot K 221: fill under the ramp at the same point, with amphora handles SS 13952-13958, contemporary with handles in the building fill proper.

A fill some 10 meters south of the west end of the building ("fill at $20/\Delta$ "), with amphora handles SS 13503-13508 and SS 13538-13540; SS 13503 dates to the early duoviri period (107-98 B.C.). · " " " Group D" but 13503 - 8 201 th-

The later date of fill in this western area is attested by the amphora handles; although Delande many are contemporary with handles found in the fill within the foundation of the Middle on lunt: Stoa and with handles from fill south of the building further east, there are enough later pieces to suggest that the deposition of this material took place somewhat later, at least in

⁶ E. Vanderpool, Final Excavation Report, Section K, 1954 (on file at the Stoa of Attalos).

⁷ Kleiner (footnote 4 above), pp. 311-312.

⁸ The dates given for amphora handles here and throughout the article are based on V. R. Grace's analysis of the material, made shortly after its excavation in the 1950's. At that time Grace made lists of the amphora handles, grouped by lot, giving a range of date for the latest pieces in each lot. These date ranges are based on the periods Grace has worked out for Knidian amphoras (see Grace, p. 31); she informs me (1986) that her chronological criteria for the handles of the period have not changed in essentials, and the broad dates given here are still considered valid. I am extremely grateful to her for sharing her notes and lists with me and for many stimulating discussions of the chronology of the Middle Stoa; I take full responsibility, of course, for any errors in the transmission of this information.

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SUSAN I. ROTROFF

the second quarter of the 2nd century; the duoviri handle (SS 13503) points to disturbance also later in the century.9

The lots collected in Kleiner's Deposit III, however, do not seem to form a logical stratigraphic unit. No east-west section of this area was drawn at the time of excavation, and it is extremely difficult to reconstruct the stratigraphy in detail. One stratigraphic feature, however, which is mentioned repeatedly in the notebooks, is the ramp referred to above, which led up to the south square from the lower level west of the Stoa. Its sloping surface was identified at several points and the material under it excavated and stored as separate lots. The following list gives these lots, with the amphora handles they contained and Miss Grace's estimated dates:

Lot K 161, with SS 12924-12939 (latest handles in the period 167-146).

Lots K 217, 218, with SS 13767-13796 (latest handles perhaps slightly later than Middle Stoa building fill).

Lot K 221, included in Kleiner's Deposit III (see above).

Lots K 222, 223, with SS 13637-13649, 13703-13715 (latest handles in the period 146-125). and = > 13642

Lot K 208, with SS 13457-13467 (latest handles in the period 167-146).

Lot K 164, with SS 13005-13031 (includes a handle of the 1st century B.C.).

Fill at 22/KZ, with SS 13728-13747 (latest handles in the period 188-167).

Here again we find, along with handles contemporary with the building fill, a number of pieces dating in the second and even the third quarter of the 2nd century. This would and went on suggest that, as one might have expected, the ramp was finished considerably after the building fill was deposited, at the earliest somewhat after the middle of the 2nd century. And again a single 1st-century handle indicates even later activity in the area.

Let us turn now to the relationship of these strata to the pithos settling basin and to the long-petal bowl under consideration (P 23095). The notebook indicates that the settling basin was overlaid by a layer described as "Hellenistic fill west of the water basin [= the water clock] and north of the stepped retaining wall [= the north wall of the 'Heliaia']" (lots K 144-146). This was considered part of the building fill, and handles from it are included in Virginia Grace's analysis of amphora handles from the fill. The bulk of these are contemporary with those in the building fill proper, but there is also a Knidian handle of all. the duoviri period (SS 12918);¹⁰ either the area has been disturbed or the fill was deposited much later than the building fill proper. In any event, if the earth over the settling basin contains later material, material within the settling basin itself cannot be considered a sealed deposit; it too may have been subject to later disturbance, and the stratigraphical

⁹ It seems likely that the late 2nd- and 1st-century material noted in this fill as well as in the building fill proper (Grace, p. 22, note 57) represents disturbance, rather than the date of leveling operations in this area. ¹⁰ The handle (KT 2112) names Laches and Eupolemos, associated with the eponym Euphragoras, of Grace's period VIB (97-88 B.C.); see Grace, p. 22, note 57, pp. 31, 35.

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THE LONG-PETAL BOWL FROM THE PITHOS SETTLING BASIN

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RECENT ISSUE of *Hesperia*, Virginia Grace has argued for a date in the second of the 2nd century for the introduction of "early" long-petal bowls.¹ The evidence this early date is P 23095,² a long-petal bowl of unusual design which was found to the for the Middle Stoa and has been associated, both by the excavator, Eugene Vand, and, on his authority, by Miss Grace, with the construction of the Middle Stoa (*ca.*). In view of the considerable re-adjustment of the dating of long-petal bowls that Grace's suggestion entails, it seems worthwhile to examine the bowl and its context in tetail.

the south of the Middle Stoa up to the level of the steps of the Stoa itself at its west end, a mount of fill was brought in, and this fill ultimately covered the pithos and put it out A careful investigation of the stratigraphy of this area, however, and of the pottery here, suggests that the situation is more complicated than has previously been defined.

The strata associated with the construction of the Middle Stoa consist of 1) the fill in the foundations of the building, preserved and excavated primarily within the nine eramost bays of the structure,⁴ and 2) the fill brought in concurrently with the laying of ica foundation to raise the level of the south square, excavated in a continuous stretch ica foundation to raise the level of the building and in patches further east.⁵ This southern ica of the westernmost six bays of the building and in patches further east.⁵ This southern ica of the building fill is considered to extend no further west than a line running south the first Stoa pier from the west. No clear stratigraphic division was noted here during ivation, and it may have been obscured by the fact that the area east of this line was dug is 3, the area west of it in 1954. In Vanderpool's final analysis of the area, however, the

W. R. Grace, "The Middle Stoa Dated by Amphora Stamps," *Hesperia* 54, 1985 (pp. 1–54 [= Grace]),

Retroff, The Athenian Agora, XXII, Hellenistic Pottery: Athenian and Imported Moldmade Bowls, 1982, no. 344, pls. 62, 87.

E. Vanderpool's comment quoted in Grace, p. 22.

Coins from this fill were published as Deposit I by F. Kleiner, "The Earliest Athenian New Style Bronze Some Evidence from the Athenian Agora," *Hesperia* 44, 1975 (pp. 302–330), pp. 303–309, but note to an A-410– Λ -414 and Λ -417 in fact come from south of the building; this has no bearing, however, on the building in the building.

Bid., Deposit II, pp. 309-311. Amphora handles from both inside the building and from the fill to the **form** the basis of Grace's analysis.

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p. 87 p. 89 dramis flow

CONCORDANCE

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SS 64	H GO WY MAR			1.0.	REFERENCE	
SS 66	H 6.9 KT 1183	SS 6515	E 6:1, E 6:2 KT 138	SS 9395	D-E 15:1 KT 1505	
SS 68	H 6.9 Bl	SS 6517	E 6:1, E 6:2 KT 531	SS 9461	F 19:6 Kat a Mar (an alus)	· ······ al w.
SS 74	H 6.9 Bh	55 6518	E 6:1, E 6:2 1 T 1 38	SS 9464	G 14:2 KTT + 88 + 2128	sugelo
SS 82	See 411: p 4	55 6579	M-N 15:1 KT-122	V SS 9465	G 14:2 KT 5V	
SS 148	H 6:4 Rh.	SS 6613	M-N 15:1 K-T 971	SS 9472	N 21:4 Conindum	
SS 282	G 6:2 KT 1784	SS 6818	C 10:1 KT 2126	SS 9539	L 19:2 KT 603	
	See also p. 10918	SS 6845	E 5.2 7	SS 9542	L 19:2 Kg ph.	
SS 326	G 14:2 KT 1695	SS 6846	E 5:2 (haven	SS 9546	L 19:2 KT 1257	
SS 333	G 14:5 KT 9442	SS 6857.	E 5:2	55 9551	L 19:2 KT 675	
SS 336	H 16:4 KT 1272	SS 6858	E 5:2	SS 9663	B 20:7 pl.	
55 266	See also p. 109 ²¹	SS 6914	N 18:3 Rh.	SS 9912	A 18:1 Rh.	
SS 370	1 16:5 FT 1926 FT	Ha SS 7301	N 19:1 KT 5	SS 9918	A 18:1 R.	
55 570	F 10:3 KM.	SS 7313	N 19:1 KT 1600	SS 10107	A-B 19-20-1 1/ T 650	
SS 1160	G 13.4 Th.	SS 7314	N.19:1. HT 1646	SS 10286	M 21:1 (BL 5	
SS 3196	M 23.1 KT 1551 /	55 7650	H 12:1 KT 1278	SS 10315	N 20:6 (pp.)	
SS 3199	M 23:1 KT 2901	SS 7656	H 12:1 KT 12"	SS 10316	N 20:6 (Re)	
SS 3679	F 13:3 KT 479.	SS 7664	H 12:1 KT 1434	SS 10497	D 17:5 RQ.	
SS 3680	F 13:3 FT 1158	SS 7668	$F_{5:1} = F_{5:1} = F_{5:1}$	SS 10498	D 17:5 Rh.	
SS 4173	E 14:1 Rh.	SS 7674	F 5:1 KT 913	SS 10831	Q 8-9 ph. 55 10712 "arou	ad 90 D 17: 6
SS 4266	E 14:1 KT 962	SS 7676	F 5:1 KT 581	SS 10834	Q 8-9 pl.	
SS 4208	E 14:1 KT 969	SS 7717	F5:1 KTIGF	SS 11050	Q 8-9 PM.	
SS 4599	E 15:4 KT 336V	SS 7770	P 10:2 Rh	SS 11621	$Q-R = 10 - 11 + 10^{10}$	
SS 4600	E 15:4 BL	SS 7771	P 10:2 RL	SS 13540	H-I 14.1	
SS 4864	C 10:1 KT 556	SS 790	H 12:1 KT 321		See also p. 102	
SS 4873	D 10:3 KT 1194	SS 7912	N 20:7 Rh.	SS 14082	0 16:3 Koan "after 200'	
SS 4920	D 11:3 KT 882	SS 8020	0.20:2	SS 14279	L 17:7 Rh	
SS 5018	D 12:2 KT 1370	SS 8131	N 20:6 8	SS 14282	L 17:7 Ry.	
SS 5029	D 12:2 KT 1500	SS 8147	H 12:1 KT 1124	SS 14287	0 17:7 ph.	
SS 5306	D 12:2 KT 1305	SS 8196	G 5:3 KT 192	SS 14295	M 18:10 ph	harts
SS 6500	E 6:1 E 6:2 10 E	SS 8934	N 21:4 Ply	SS 14296	M 18:10 k.	
SS 6502	E 6.9 KT 1598	SS 9000	A-B 19-20:1 Latin	SS 14703	P 20:2 is - i - i	
SS 6503	E 6:2 KT 15(8	SS 9129	A-B 19-20:1 Latin	SS 14736	P 21.4 08	
SS 6504	E 6:2 KT 1626	SS 9193	A-B 19-20:1 KT 1554	SS 14744	P 21:4 0 l	
SS 6511	E 6:1, E 6:2 KT 765/	SS 9383	R 21:2		1~1	-
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LONG-PETAL BOWLS AND MSBF