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Margarethe Billerbeck, Fribourg – Thomas Gelzer, Bern
Adalberto Giovannini, Genève – Denis Knoepfler, Neuchâtel
Philippe Mudry, Lausanne – Christoph Riedweg, Zürich
Rudolf Wachter, Basel

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Grain for Delos

By Joshua D. Sosin, Durham, NC

A decade ago Gary Reger offered an arresting analysis of Delian *sitōnia*-funds, special endowments that were dedicated to the purchase of grain. He argued that these funds suffered “chronic cash shortfall[s]” of roughly 25%. The study contributed to Reger’s more comprehensive argument that free Delos was not a great hub of trade, but rather a “Kykladic backwater”.¹ I do not wish to challenge the broader thesis, but will argue that Reger’s observations on the mechanics of the Delian *sitōnia*-funds need modification.

Early Sitōnia

A scrap of the *hieropoioi* accounts from 301 BC tells us that the city borrowed 1,000 drachmas from Apollo in order to purchase grain.² Half a century later there was another loan to purchase grain; the *hieropoioi* of Apollo report lending the city 10,050 drachmas:³

124 καὶ εἰς τὴν αἰ[τῶν]-
ἦσαν ἐδανείσασθαι τοῦ ἱεροῦ ἀργηρίου κατὰ ψήφισμα τῆς πόλεως καὶ προδανειστέας
ἔσπονδοῦνται ἰεροπόροισιν, Πλούσιων Ἀγορηφόροισιν, Σιωπῆθων Νίκωνος δόσχυιάς
ΜΠ ἐπὶ ὑποθήκῃ τάλ[ε]
προσόδους δημοσίων

Reger translates and explains⁴:

‘And for the purchase of grain we borrowed of the sacred money by decree for the city and for the guarantors [three persons are named] 10,500 dr on the hypothecation of the public incomes. ... The money was lent to the *hieropoioi* themselves (the first-person-plural subject of the sentence), on behalf of the city (τῆς πόλεως) and three guarantors (προδανειστέας) ... [T]he repayment of the loan was accomplished through the obligation of public income.

But δανείζω in the active voice means “lend”, not borrow, and takes a dative indirect object (τῆς πόλεως καὶ προδανειστέας). Ὑρέγ plus the genitive, and not a

1 G. Reger, “The Public Purchase of Grain on Independent Delos”, *ClAnt* 12 (1993) 300–334; “shortfall” 328; idem, *Regionalism and Change in the Economy of Independent Delos* (Berkeley 1994); “backwater” 188.

2 *IG XI.2* 146, A.20–21: -- -- δόσχυιάς ΗΗΗΗ καὶ ἀλλὰς ἐπὶ ἔξωσιν τοῦ αἴρου οὐ ἢ πόλεως ἐργότρο Χ (... 400 drachmas, and another 1,000 for the price of the grain that the city purchased).

3 *IG XI.2* 287, A.123–125 (250 BC); for ΜΠ (124) corrected from ΜΡ see V. Chankowski-Sablé/C. Feyel, “Comptes de la fin de l’indépendance délienne”, *BCH* 121 (1997) 103–124, at 123.

4 Reger, *ClAnt* 12 (1993) 318.

ἡϋδατιϋ, would be needed to express “on behalf of someone”. We should translate as follows:

And for the purchase of grain, in accordance with a decree, we lent 10,050 drachmas from the sacred money to the city and the *prodaneisai*, Xenokrates son of Hierombotos, Polyvenos son of Arseimbotos and Ssoidemos son of Nikon, against the public revenues as security.

Repayment was secured, not accomplished, by encumbrance of a matching sum from the public revenues, which were to be tapped only in the unlikely event that the borrower defaulted and the three *prodaneisai* lacked sufficient assets to cover the debt.

Neither of these loans, as Reger rightly saw, implies the existence of an organized institution or a permanent fund, as opposed to the one-time loan of money for the purchase of grain.

Sitonia in 209 BC

Reger suggested that the Delians created the *sitonia*-fund in 209 BC, observing that the *hieropoioi* for that year recorded two payments to *sitoniai*, in the amounts of 13,014 drachmas and 25,138 drachmas 1¹/₂ obols⁵:

- ... και ἐθηκεν εἰς Ἀρτεμιῶν ΜΗΗΗΔΗΗ| εἴθεσαν τοῦ ... ἰου ---
 ... ος παραούσης βουλής και γκαμματέ[ω]ν Εὐκλείδου και Τελετοροκίτου [- - -
 παρούσης|
 8 [βου]λής και γκαμματέων Εὐκλείδου και [Τ]ελετοροκίτου εἰς τὸ ἱερόν --- παρούσης|
 [μ]ε]νου τοῦ θηλου ΔΗ οὐκ εἴθεγκν οἱ ταῖ αἰ Καλλίμαχος και Φύλων Ι ---
 12 [- τ]ὸ ρεθεν τοῖς ἀνἠρα[ε]ί| ||| ἐδο[μ]ε]ν τοῖς αἰωόνος Διοφάνη. Σα ---
 δ[ε]γ[υ]λ[ω]ν ΜΧΧΧΔΗΗΗ ἄουρον ἐν Ἀρτεμ[ι]ῶν ΜΜΜΗΔΔΔΔΓΗΗ|] και ἥμε[ε]ς ---
 ... τα ΓΗΗΗΓΓ⁶ τὸ πᾶν ἐν Ἀρτεμ[ι]ῶν ΜΜΜ⁷ΧΗΗΗΗΓΓ⁸ ΔΔΔΓΗΗΗ⁹ τοῦτο [π]αροῦσεν
 ἑγοροῦ[ε]ς Εκαταιει και Αυοῦν[ι]-
 [β]ῶ]ν παραούσης βουλή[ς] και γκαμματέ[ων] τοῦ τῆς πρόσεως [Ε]ὐκλείδου, τοῦ τῶν ἱερο-
 ροῦ[ων] Τελετοροκίτου|]

The following explanation of events is offered⁶:

In its very first occurrence, in 209 B.C., the fund received a payment of 13,014 dr early in the year, and another in Artemision (4⁷) of 25,138 dr and a few obols. The *sitoniai* seem to have repaid to the *hieropoioi* in Artemision (4) a total of at least 27,488 dr 1¹/₂ ob, though certainly about these transactions is impossible, owing to the lacunae in the text.

Thus two payments are envisioned, but ἄουρον ἐν Ἀρτεμ[ι]ῶν ΜΜΜΗΔΔΔΔΓΗΗ|] in line 12 means, “The balance in the Temple of Artemis (is) 25,138 drachmas 1¹/₂ obols”. Reger has mistaken the temple of Artemis (Ἀρτεμιῶν) for

the month of Artemision (Ἀρτεμιῶν)⁸. ἄουρον is the subject of an elliptical verb, not the direct object of ἐδο[μ]ε]ν in the preceding sentence. The Greek does not say who paid in the 27,488 drachmas 1¹/₂ obols. The account simply states that money was in the temple of Artemis. The syntax in this portion of the text is clear: it is addition.

| Line | Transaction | Figure |
|-------|--|--|
| 12 | The balance in the Temple of Artemis was | 25,138 dr. 1 ¹ / ₂ ob. |
| 12-13 | And we [paid in [And]] | N dr.] 850 dr. |
| 13 | The total in the Temple of Artemis is | 27,488 dr. 1 ¹ / ₂ ob. |

Table 1. Transactions in *I Delos* I 362.A.12-13.

Line 12 seems thus to have acknowledged a round deposit of 1,500 drachmas (27,488 dr. 1¹/₂ ob. – 25,138 dr. 1¹/₂ ob. – 850 dr. = 1,500 dr.). Durrbach’s restoration of line 12, ΜΜΜΗΔΔΔΔΓΗΗ|], suggests that he appreciated the syntax. Though the restoration is not beyond doubt, considerations of space do make it probable. This figure, in 12, and the balance in 13 both end in the unround sum of 8 drachmas 1¹/₂ obols, a similarity that is not likely to be an accident. Like the *hieropoioi*, Durrbach did the math. The sense of lines 11–14 seems to be: “We gave the *sitoniai* 13,014 drachmas, after this payment (and others from the previous lines⁹); the balance in the Temple of Artemis was 25,138 drachmas 1¹/₂ obols, to which we added 1,500 and another 850 drachmas: the final balance in the Temple of Artemis was 27,488 drachmas 1¹/₂ obols, all of which we transferred to the incoming *hieropoioi*.” The 38,152 drachmas 1¹/₂ obols, most of which Reger thought were paid to the *sitoniai* in the month of Artemision⁹, were only 13,014¹⁰ and could have been paid in any month – the Greek identifies a place, the Artemision, not a month.

Whether the 13,014 drachmas belonged to or derived from an endowment, the Greek does not specify and we do not know. A *sitónēs* was a grain-purchaser; whether he handled endowed money was defined by law. Title alone is not sufficient evidence to posit the existence of an endowment. For example, in

5 *I Delos* I 362.A.6–14; Reger, *Clair* 12 (1993) 319 Table 3, with discussion at 320.
 6 Reger, *Clair* 12 (1993) 320.
 7 “4” here indicates that Artemision was the fourth month in the Delian calendar.

8 The month Artemision does not appear to be attested on Delos in any case but the genitive; e.g.: *IG* XI.2.138.A.fr.a.6: 148.65; 158.A.42: 159.A.33; 203.A.31.41: 205.B.fr.a.17; fr.b+c.7: 224.A.10: 287.A.6; 19.55; *IG* Delos I 290.66: 316.86; 338.A.fr.b.29: 354.20: 354.67: II 372.A.80; 396.A.73; 405.29; 442.A.102; 104.105; 107.108; 109.129; 130.131; 185; 443.A.fr.b.10; 97; 455.A.fr.c.1: 456.B.14; 459.47; 460.fr.s.15; fr.v.5: 461.A.fr.b.4; 503.20.

9 Reger, *Clair* 12 (1993) 320, adduces the text in the context of an argument as to the “significant timing of loans” for *sitoniai*.

10 U. Fantasia, “Finanza citadina, liberalità privata e situs demosticos: considerazioni su alcuni documenti epigrafici”, *Scritta storica antiqua* 2 (1989) 47–84; at 49, mentions only the 13,014 drachmas.

two very well known third-century instances Erythrai and Samos commisioned *stónai* for what appear to have been one-time purchases of grain¹¹.

Stónia in 192 BC

Evidence for *stónia* in 192 BC consists of a handful of lines in the *hieropoioi* account for that year¹². The section of the account as it stands does not construe:

68 ... [τ]ο ρά[ν]· ΜΡ'XXΓ'ΗΡ'ΔΔ· κεράνη τού θημιοτίου ΡΡ'ΧΗΗΑΔΔΔΓ'ΗΗΗΙΙΙ[Γ]

Two erased lines

κεράνη τού ἀργύριου τού θ[ι]ημοτίου ΜΜΡ'XXXΓ'ΗΔΔΔΔΔΗΗΗΙΙΙΧ [ε]ρά

ραύ] και Φωραει και τόδε ἄλλο Μ[ε]νώλλ[ω]ι[?] | | [..... τού] ἄτρον? εἰς τὴν αὐρώναν

ΜΜΜΜXXXΓ'ΗΗΗΗΓ'ΔΔΔΔXXX και ἐπι τῆς

[θη]τεβας ἀόρη [ε]θ[ι]εαυ] ταμίαι Ηεγευ[θ]ιδος και Ερξέωιδης εἰς τὴν αὐρώναν

ΜΜΗΗΗΔΔΔΔΔΓ'ΗΗΗΗΓ' κεράνη τού ο[ι]·

τῶν[ν]κῶν Ρ'Π'ΗΗΔΔΔΔΓ'ΗΗΗΗΧ' ἀπο τού[τ]ιου ἔδοθεν τοῖς αὐρώναν 'Ηγέα, Εὐφράνορ,

Μενώλλαι ΜΜΜΜΡ'XX λαίτῶν]

τῶν ο[ι]κῶνκῶν Ρ'XXXΗΗΔΔΔΔΓ'ΗΗΗΗΧ' και τούτο παραέδοθεν ἑγοστοιός Μενώλλαι και

Φωραει¹³

Vacat

[Και τόδε ἄλλο ἀργύριον εἰσῆκε τῶν θεοῖ· ἐ[ν] τῆ]ημοτίων· ...

74 ... Sum: 17,670 drachmas. Total of the public account 56,248 drachmas 3/12 obols.

68 Total money belonging to the public account 28,643 drachmas 3/12 obols from the grain fund: we transferred (sc. it) to Mentyllios and Phókaius. And another sum to Mentyllios, ... of

69 the grain for the purchase of grain: 34,890 drachmas 7/12 obols, and in our magistracy the treasurers Perandros and Euxenides deposited for the purchase of grain 20,346 drachmas

4/12 obols. Total of the grain fund: 55,236 drachmas 4/12 obols.

72 From this we gave the grain-purchasers, Hégæas, Euphranór and Mentyllios 47,000 drachmas. The balance of the grain fund is 8,236 drachmas 4/12 obols. And this we gave to the

74 *hieropoioi* Mentyllios and Phókaius.

And this other sum of money came in to the god: from rents: ...

Let us begin with lines 70–73, which are coherent independent from 68–69. The

account records two deposits for the purchase of grain, the total of the two

deposits, the subtraction of 47,000 drachmas from that total and the new

balance¹³.

11 *I Erythrai* 128.20–29, *IG XII.6* 11.37–49.

12 *I Delos* II 399, A.66–74.

13 Cf. J. A. O. Larsen, *Economic Survey of Ancient Rome* IV (Baltimore 1933–1940) 345, with n. 25 below.

| Line | Transaction | Sum |
|------|---------------------------|-----------------------|
| 70 | Deposit εἰς τὴν αὐρώναν | 34,890 dr. 7/12 ob. |
| 71 | Deposit εἰς τὴν αὐρώναν | + 20,346 dr. 4/12 ob. |
| 72 | Subtotal | 55,236 dr. 4/12 ob. |
| 72 | Transfer to <i>stónai</i> | – 47,000 dr. |
| 73 | Balance in grain fund | 8,236 dr. 4/12 ob. |

The restoration, Μ[ε]νώλλ[ω]ι, in line 70 cannot be correct – Durrbach had doubts¹⁴. If the *hieropoioi* had transferred the 34,890 drachmas 7/12 obols to Mentyllios, they could not subsequently have given the money to the *stónai* (ἔδοθεν, 72). None of the figures in 70–73 is the result of modern deduction: all were recorded on the stone. And they fall. It would be perverse to suggest that the fractional numbers in 70 and 71 balance with those in 72 by coincidence. We keep math or Mentyllios, but not both.

In the place of Μ[ε]νώλλ[ω]ι I propose ἄ[ε]ργύρι[ο]ν¹⁵. In the Delian *hieropoioi* accounts the phrase και τόδε ἄλλο ἀργύριον typically introduces entries, and in this text it is not only the introduction of choice¹⁶, but the phrase και τόδε ἄλλο is always followed by ἀργύριον, never by another word¹⁷. Thus, we may restore και τόδε ἄλλο ἄ[ε]ργύρι[ο]ν with some confidence. This leaves | | [..... τού] ἄτρον. The formulaic phrase τόδε ἄλλο ἀργύριον is either the subject or direct object of a verb, usually εἰσῆκε¹⁸, that denotes the movement of money as it enters¹⁹ or leaves²⁰ the hands of the *hieropoioi*. Of the available options εἰσῆκε fits

14 *I Delos* II 399, A. p. 62: "Μ[ε]νώλλ[ω]ι[?]· conjecture de G. Glotz: on peut aussi supposer ἄτρο τῆς ὀ[ι]ν[η]ς[?] (ou plutôt ὀ[ι]ν[η]σεως), en raison de la lacune); en raison de: mieux encore ἄτρο τῆς τ[η]λο[υ]ν[η]σεως], car il s'agit d'une recette, et non d'un achat." "The word κῶν[η]τος appears to be unattested on Delos.

15 An *alpha* (ἀ[ε]ργύρι[ο]ν[V]), not *miu* (Μ[ε]νώλλ[ω]ι), seemed plausible to Durrbach, *I Delos* II 399, A. p. 62, and graphic confusion of *omega* and *omicron* is common enough in antiquity and now.

16 E.g. *I Delos* II 399, A.16, 35–36, 58, 74, 88, 92, 122.

17 Also the case in e.g. *I Delos* II 442, A (179 BC).

18 *IG XI.2* 161 D left.1–2: 162, A.42; 288, 10 (restored); *I Delos* I 314, A.12: 316, 58 (restored), 63; 320, B.7; 353, A.49 (restored); 354, 17, 23, 27, 29, 30; 368, 23 (restored); 34 (restored); 45; 371, A.4 (restored-d), 10 (restored); 41: II 372, A.10, 19, 24, 28, 31 (restored); 71; 399, A.74, 88, 92, 94, 122; 441, 11 (restored); 442, A.140, 145, 152, 155, 159; 449, B.25; 460, 1, 21; 461, B. b.58.

19 *Tiferna: I Delos* II 399, A.16, 58; 442, A.38, 99; 443, A, b (restored); 445, A, b.19; 461, A, a.77–78 (restored); παρακάμψων: *IG XI.2* 147, B.6; 224, A.4 (restored); *I Delos* I 354, 4, 22 (restored); 356b; A.28 (restored); II 399, A.35–36; 442, A.75; 448, A.21 (restored-d).

20 *Παροδίσκιαι: I Delos* I 364, A.23, 365; 55–56; ἔξωγει: *I Delos* II 442, A.63; δαυεῖται: *IG XI.2* 287, A.125–126; *I Delos* II 406, B.1, 3 (restored); 55 (restored); 442, A.209 (restored); 215, 217; 449, A.27; ἀνελάσκω: *IG XI.2* 203, A.57–58.

The same account that is used to tell a story of massive financial shortfall could be adduced in support of the opposite. Perhaps an investment of 47,000 drachmas returned 55,236 drachmas $4\frac{1}{2}$ obols, yielding a profit of roughly 18%.²⁹ If, moreover, the situation were so dire – as a net loss of over a quarter might be viewed – why were only 47,000 drachmas disbursed to the *sitōnai*? Why not try to recoup the losses? The Greek does not suggest that the fund was a losing proposition. If we do not begin with minimalist assumptions about the Delian grain-market it is equally plausible that an investment of 47,000 drachmas returned roughly 18% for 193/2 BC, so that the god, and ultimately the state, earned a handsome profit. On current evidence any conclusion as to loss or gain will remain a modern invention.³⁰

Sitōnia in 180/79 BC

IDēlios II 442.A.90–140 (179 BC) furnishes rich data on the operations of a grain fund in 180/79 BC. I present that data in a series of tables below. Lines 90–97 record money received by the current *hieropoioi*, in the magistracy of Dēmārēs, from the previous *hieropoioi*, and transferred into the public *kibōtos*; the account includes the qualification and date of deposit, and the bank through which the sealed jar containing the funds came.

| Line | Qualification of Dep. | Date | Deposited | Bank of | Sum Received |
|-------|---------------------------------------|--------|------------------|---------|-------------------------|
| 90–91 | εἰς τὴν οὐρανίαν | Posid. | Ph&S | Ph&S | 10,000 dr. |
| 91–92 | εἰς τὴν οὐρανίαν | Posid. | Ph&S | H&M | 1,500 dr. |
| 92–93 | κατὰ τὴν θιάραξιν εἰς τὴν οὐρανίαν | Posid. | Ph&S | N&H | 3,060 dr. |
| 93–94 | εἰς τὴν οὐρανίαν | Posid. | Ph&S | N&H | 4,000 dr. ³¹ |
| | | | <i>sub-total</i> | | 18,560 dr. |

29 8,236 dr. $4\frac{1}{2}$ ob. = 18% × 47,000 dr.

30 It is worth noting that in one case, the *hieropoioi* refer, in a list of public monies received ἐν τῇ ἀθάλη κούρω (IDēlios II 399.A.35–36), to the deposit of “surplus from the *sitōnia*” (52–54). ἀλλοῦ ὀσπίου ἐν αἰ. ἐπιφαν. ΗΛΑΔΑΓΓΗΗΗΗ, ἐπιγραφὴν ἐγοῦσα ἐπ’ ἀγορῶν | [Σωφ]ηδρότου λέγο-
πουοῖ. Εὐεσβίῃς καὶ Ἀντιγόνος ἔθεσαν κατὰ τὴν ἐπιγραφὴν τοῦ θη[μ]ίου τὸ ἀργυροῦμενον ἀπὸ τῆς | [οἰ]ρανίας καὶ ὁ τραπεζίτουσιν παρὰ Σωφηδρότου καὶ Πλοκλήτου (Another jar in which were 148 drachmas 3 obols, bearing the inscription, “In the magistracy of Sōstratos the *hieropoioi* Euxenides and Antigonos deposited, according to the decree of the people, the surplus from the *sitōnia* and that which they received from Sōkritos and Polyxenos”). We do not know whether the surplus was generated by sale of grain, i.e. that it was surplus revenue, or whether it was deposited for the purpose of *sitōnia*, but not spent. The phrase, τὸ ἀργυροῦμενον ἀπὸ τῆς | [οἰ]ρανίας, may suggest the latter, i.e. that the money was left over from the purchase of grain, not its sale. The account is from 192 BC, but refers to a deposit made in 195.
31 We can only guess whether IDēlios II 441.3–4 (180 BC) is in some way related to this deposit, al-
so routed through the bank of Nymphodōros and Herakleides.

| | | | | | |
|-------|--------------------|--------|------------------|------|---|
| 94–95 | ἐκ τῶν ἀκαταράκτων | Posid. | Ph&S | N&H | 432 dr. $1\frac{1}{2}$ ob. |
| 95–96 | τῶν ἀκαταράκτων | Posid. | Ph&S | Ph&S | 3,370 dr. $\frac{1}{2}$ ob. |
| 96–97 | ἐκ τῶν ἀκαταράκτων | Posid. | Ph&S | H&M | 83 dr. 2 ob. |
| | | | <i>sub-total</i> | | 3,885 dr. 3 ³⁰ / ₁₆ ob. |

Table 3a. Transfer of deposits εἰς τὴν οὐρανίαν. IDēlios II 442.A.90–97. For the last three entries see the corresponding entries in Table 3c. Ph&S = in the magistracy of Phōkarkos; Ph&S = the bank of Philōn and Sīlenos; H&M = Hellen and Mantineus; N&H = Nymphodōros and Herakleides

Lines 106–122 record money deposited by the *tamiai* to the public *kibōtos* in the year of the current *hieropoioi*, in the magistracy of Dēmārēs.

| Line | Qualification of Dep. | Date deposited by <i>tamiai</i> | Bank of | Sum | |
|---------|---------------------------------------|------------------------------------|------------------|---|--|
| 106–107 | εἰς τὴν οὐρανίαν κατὰ τὴν θιάραξιν | Artem. | Dēm. | H&M | 6,560 dr. |
| 107–108 | εἰς τὴν οὐρανίαν | Artem. | Dēm. | N&H | 6,000 dr. |
| 108–109 | εἰς τὴν οὐρανίαν | Artem. | Dēm. | Ph&S. | 6,000 dr. |
| | | | <i>sub-total</i> | 18,560 dr. | |
| 109–110 | εἰς τὴν οὐρανίαν | Metag. | Dēm. | Ph&S | 5,000 dr. |
| 110–111 | εἰς τὴν οὐρανίαν κατὰ τὴν θιάραξιν | Metag. | Dēm. | H&M | 5,000 dr. |
| 111–112 | εἰς τὴν οὐρανίαν | Metag. | Dēm. | N&H | 4,674 dr. 2 ¹ / ₁₆ ob. |
| | | | <i>sub-total</i> | 14,674 dr. 2 ¹ / ₁₆ ob. | |
| 115–116 | εἰς τὴν οὐρανίαν | Posid. | Dēm. | N&H | 5,060 dr. |
| 116–117 | εἰς τὴν οὐρανίαν | Posid. | Dēm. | Ph&S | 7,000 dr. |
| 118–119 | εἰς τὴν οὐρανίαν κατὰ τὴν θιάραξιν | Posid. | Dēm. | H&M | 6,500 dr. |
| | | | <i>sub-total</i> | 18,560 dr. | |
| 119–120 | ἐκ τῶν ἀκαταράκτων | Posid. | Dēm. | H&M | 2,500 dr. |
| 120–121 | ἐκ τῶν ἀκαταράκτων | Posid. | Dēm. | N&H | 1,374 dr. 3 ¹ / ₁₆ ob. |
| | | | <i>sub-total</i> | 3,874 dr. 3 ¹ / ₁₆ ob. | |

Table 3b. Deposits εἰς τὴν οὐρανίαν. IDēlios II 442.A.106–122. Dēm. = in the magistracy of Dēmārēs

Lines 122–140 record money withdrawn by the *hieropoioi* for transfer to the *sitōnai*, in the magistracy of Dēmārēs, including the date of withdrawal.

| Line | Qualification of Dep. | Date deposited by <i>tamiai</i> | Bank of | Date withdrawn | Sum | |
|---------|--|------------------------------------|---------|-------------------|--------|---|
| 123 | εἰς τὴν σιτώνιαν | Posid. | Phok. | N&H | Len. | 3,060 dr. |
| 123-124 | εἰς τὴν σιτώνιαν | Posid. | Phok. | N&H | Len. | 4,000 dr. |
| 124-125 | εἰς τὴν σιτώνιαν | Posid. | Phok. | Ph&S | Len. | 10,000 dr. |
| 125-126 | εἰς τὴν σιτώνιαν κατὰ τὴν δατάρεθιν | Posid. | Phok. | H&M | Len. | 1,500 dr. |
| 126-127 | | | | <i>sub-total</i> | | 18,560 dr. |
| 129-130 | εἰς τὴν σιτώνιαν κατὰ τὴν δατάρεθιν | Artem. | Dem. | H&M | Tharg. | 6,560 dr. |
| 130-131 | εἰς τὴν σιτώνιαν | Artem. | Dem. | N&H | Tharg. | 6,000 dr. |
| 131-132 | εἰς τὴν σιτώνιαν | Artem. | Dem. | Ph&S | Tharg. | 6,000 dr. |
| 132 | | | | <i>sub-total</i> | | 18,560 dr. |
| 132-133 | εἰς τὴν σιτώνιαν | Metag. | Dem. | N&H | Bouph. | 4,674 dr. 2 ¹ / ₁₂ ob. |
| 133-134 | εἰς τὴν σιτώνιαν | Metag. | Dem. | H&M | Bouph. | 5,000 dr. |
| 134-135 | εἰς τὴν σιτώνιαν κατὰ τὴν δατάρεθιν | Metag. | Dem. | Ph&S | Bouph. | 5,000 dr. |
| 135-136 | τῶν ἀκαταράκτων | Posid. | Phok. | Ph&S | Bouph. | 3,370 dr. 9 ¹ / ₁₂ ob. |
| 136-137 | ἐκ τῶν ἀκαταράκτων | Posid. | Phok. | N&H | Bouph. | 432 dr. 1 ¹ / ₁₂ ob. |
| 137-138 | ἐκ τῶν ἀκαταράκτων | Posid. | Phok. | H&M | Bouph. | 83 dr. 2 ob. |
| 138-139 | | | | <i>sub-total</i> | | 18,560 dr. 9 ¹ / ₁₂ ob. |

Table 3c. Money withdrawn for transfer to the *σιτόναι*, *LDelos* II 442.A.122-140. For the last three entries see the corresponding entries in Table 3a.

Chronological tabulation of deposits and withdrawals allows us to build a narrative of procedure.

In the month of Posideôn, under Phókaius, the *tamiai* deposited in the temple 18,560 drachmas for *σιτόνια* and 3,885 drachmas 3¹⁰/₁₂ obols that were not part of the normal budgetary allocation, or *διαταξι*: at the end of that month the outgoing *hieropoioi* transferred both blocks of deposits via the incoming *hieropoioi* to the public *κibótos* (90-94, 94-97). In Lénaion, the first month of the next year, under Démareés, the *hieropoioi* withdrew the same 18,650 drachmas, in the same lots, in the same sealed jars in which the banks had put them, and gave the cash to the *σιτόναι* (123-127).

Next – and here we must conjecture, because the account tracks money only as it enters and exits temple-oversight³² – the *σιτόναι* used the money to purchase grain. Then they sold the grain, presumably at Delos, such that they could deliver 18,650 drachmas to the *tamiai* by the month of Artemisíon.

The *tamiai* deposited the 18,650 drachmas in the public *κibótos* in Artemisíon (106-109). In the next month, Thargéiôn, the *hieropoioi* withdrew the same 18,560 drachmas (as before), and gave them to the *σιτόναι* (129-132). Again – and again, we must conjecture – the *σιτόναι* purchased grain and sold it such that the money could be re-paid to the *tamiai* by Metageitíon. But in Metageitíon the *tamiai* deposited only 14,674 drachmas 2⁸/₁₂ obols (109-112). In the next month, Bouphioníon, the *hieropoioi* withdrew the same 14,674 drachmas 2⁹/₁₂ obols, as well as the 3,885 drachmas 3¹⁰/₁₂ obols, in the same sealed jars in which they had been deposited nine months before (94-97), for a total of 18,560 drachmas 9¹/₁₂ obols (138-139); they then gave both lots of coin to the *σιτόναι* (132-135, 135-139). For the third and final time of the year – conjecture again – the *σιτόναι* sold the grain such that they could repay the money to the *tamiai* by Posideôn.

In Posideôn the *tamiai* deposited 18,560 drachmas for *σιτόνια* plus an additional 3,874 drachmas 3¹/₁₂ obols that were not part of the normal budgetary allocation (115-119, 119-121). At this point the year ended, the officials stepped down, and the process started over. If we had a similarly complete account for 178 we could follow the mechanism through additional cycles.

Fantasia argued that the fund was capitalized not at 55,680 drachmas, as several have assumed³³, but at 18,560, and that the same money turned over three times per year³⁴. He observed that in the section of the account covering deposits for *σιτόνια* the three deposits κατά τὴν δατάρεθιν (6,560 [107], 5,000 [111], 6,500 [119]) amount to 18,060, which is only 500 drachmas below the amount disbursed to the *σιτόναι* three times throughout 179 BC. According to

Table 3d. Deposits and withdrawals for *σιτόνια* in 180/79, as derived from *LDelos* II 442.A.90-140.

| 442.A | Magistrate | Month | Activity | Amount |
|---------|------------|-----------|----------|---|
| 90-97 | Phókaius | 12 Posid. | Depos. | 18,560 dr. |
| 123-127 | Démareés | 01 Len. | Withdr. | 18,560 dr. |
| 106-109 | " | 04 Artem. | Depos. | 18,560 dr. |
| 129-132 | " | 05 Tharg. | Withdr. | 18,560 dr. |
| 109-112 | " | 08 Metag. | Depos. | 14,674 dr. 2 ¹ / ₁₂ ob. |
| 132-139 | " | 09 Bouph. | Withdr. | 14,674 dr. 2 ¹ / ₁₂ ob. |
| 115-121 | " | 12 Posid. | Depos. | 18,560 dr. + 3,874 dr. 3 ¹ / ₁₂ ob. |

32 See e.g. T. Linders, "The Delian Temple Accounts: Some Observations", *OpAth* 19 (1992) 69-73.
 33 I.e. 18,560 drachmas × 3; Larsen, *ESAR* IV 347; L. Migeotte, "Le pain quotidien dans les cités hellénistiques: A propos des fonds permanents pour l'approvisionnement en grain", *Cahiers Glotz* 2 (1991) 19-41, 31-32; Regier, *ClAnt* 12 (1993) 319 Table 3.
 34 Fantasia, *Seria historica antiqua* 2 (1989) 51-52.

Fantasia this cannot be coincidence. The force of the argument is unclear. Nevertheless Fantasia is, I suggest, right for a simpler reason. It is evident from *I Delios* II 442.A.122–135 that coin was disbursed to *sitōniai* in the same sealed jars in which it had been deposited the month before³⁵. At no time can the fund be shown to have had more than 18,560 drachmas $\frac{9}{12}$ obols³⁶. The Delians thus moved the same 18,560 drachmas three times per year³⁷. The *sitōnia*-fund was a rolling fund capitalized at 18,560 drachmas with three-annual turnover.

Four deposits made by the *tamiai* in 180/79 are qualified by the phrase, *κατὰ τὴν δατάειν*³⁸, which should indicate money that was allocated in the annual budget³⁹. Reger clarifies⁴⁰.

The careful distinction between these deposits [i.e. those labeled *κατὰ τὴν δατάειν*] and the rest is not likely to be accidental; it is meant to distinguish, I believe, between funds realized from previous sale of grain and plowed back into the *sitōnia* (funds simply εἰς τὴν οὐρωσαν) and funds added to the *sitōnia* by the *ekklesia* to bring the grain fund up to full size.

But deposits designated *κατὰ τὴν δατάειν* were made throughout the year. Surely when the Delians assembled to set the annual budget (*diataxis*) they could not have predicted the amounts by which the fund would be deficient as a result of three separate sales across an entire year. Perhaps the annual budget reserved a large block of cash from which deficits could be rectified. But the provision of make-up money, even from earmarked funds, suggests randomness, and deposits designated *κατὰ τὴν δατάειν* give the appearance of order: all, for reasons unexplained and unknown, were routed through the bank of Hellen and Mantineus⁴¹. No other bank appears to have handled such deposits. The dictionary-meaning of *κατὰ τὴν δατάειν* is clear enough, but precisely what procedure the phrase indicated seems beyond knowing for now.

So too the deposits labeled *τῶν ἀκατατάκτων/ἔκ τῶν ἀδοκασίων/ἔκ τῶν ἀκατατάκτων*⁴². Reger suggests that these “undesignated funds” were called on to replenish the fund when revenue from the sale of grain fell short⁴³. On this in-

terpretation the rubrics indicated two classes of extraordinary deposit to the *sitōnia* fund to rectify shortfall, one reserved in advance by budgetary provision and the other consisting of funds that had not been earmarked. Now, the 3,885 drachmas $3\frac{10}{12}$ obols in “undesignated funds” that were given to the *sitōniai* in Bouphonion under Démareôs (135–138) raised Metzgetlton’s slim deposit of 14,674 drachmas $2\frac{8}{12}$ obols to 18,650–drachmas – plus half an obol, to be precise. Thus, Reger suggests that the sale of grain fell short by 3,885 drachmas $3\frac{1}{12}$ obols, and so the *ekklesia* contributed that much (plus a half-obol, for some reason⁴⁴) to the fund to bring it up to full strength. But if the *ekklesia* did provide the 3,885 drachmas $3\frac{10}{12}$ obols for this purpose, it can only have been by incredible coincidence, since the *tamiai* deposited the 3,885 drachmas $3\frac{10}{12}$ obols in a sealed jar in Posideion under Phôkaietos, nine months before the shortfall is alleged to have occurred (see Table 3d above). Once again the dictionary-meaning of a phrase seems straightforward, while the procedure that the phrase flagged remains obscure.

Reger calculated total alleged shortfalls for 179 BC by adding the money deposited *κατὰ τὴν δατάειν* in 179 (13,060 drachmas⁴⁵) to the “undesignated funds” (3,885 drachmas $3\frac{10}{12}$ obols⁴⁶). Thus, he concluded that “across the whole year [sc. 179 BC] the grain fund was underfunded by 16,945 dr. or about 30 percent of the total required⁴⁷”. But it is not evident that either designation indicates rectification of shortfall of the sort envisioned by Reger⁴⁸. Thus, the sum of deposits under the two rubrics furnishes weak measurement of the fund’s profitability. We do not know even whether logic permits us to add the two categories.

44 Migeotte, *Cahiers Glotz* 2 (1991) 30 n. 35: “sans doute par erreur”.

45 But if deposits *κατὰ τὴν δατάειν* were designed “to bring the grain fund up to full size” as Reger, *ClAnt* 12 (1993) 322, suggests, then to gauge sales in 179 BC we must exclude the deposit recorded at 91–92 (also 125–126), and include the one recorded at 118–119, so that the alleged shortfall, in this category alone, would have been 18,060 drachmas.

46 Not 3,885 drachmas $3\frac{1}{12}$ obols, *ibid.*

47 Reger, *ClAnt* 12 (1993) 322.

48 Reger does not mention that some *sitōnia*-funds safeguarded against shortfall: SEG XLIII 205.29–33 (Koronēia, III BC): ἦ δὲ ἵκε τῆς ἐνόια ἡνωσεται, τοῖσδὸν δὲ ραμίς ὁ ποσόδοςω | [τῶ] δευτέρου περιελαίμενος τῆς πολεμάρχου τοῦ ποσιδέῖου μισρον ἀγορεύον ἀός τὰς ἐπτα- κτάδας χη ἀρόβου[θω] (If there is a deficit the treasurer in office for the second four-month period shall pay the polemarch in addition the money that falls short of the seven hundred [the amount of the *principal*] and he shall re-pay ...), with L. Migeotte, “Un Fonds d’achat de grain à Coronée”, *Beotica Antiqua* 3 (1993) 11–23, esp. 19. J. Bingen, AC 50 (1981) 43–44 and J. Tréheux, *BCH* 110 (1986) 419–421, lines 12–17: τοῖς δὲ ἀρο[βίταις, ἐὰν τῆ] γένεται ἕβεται, ἀναρ[γί]ε[λ]αινοῦ τῶν ἀρο[βίταις] τοῖς δὲ ἀγορεύουσις [ἐκδιδόναι τοῖς] οὐροθέταις ἢ τῶν ἀρο[βίταις] [βητοῦ] ποσούη[λια] ἕξ ἀρόβου τῆς π[οσιδέου]σιν ἧτος ἀν[ο]γο[βή] (The *sitōthēta*, if there is a deficit, shall declare the amount and the accountants shall pay the sitōthēta immediately whatever their deficit is, from the total revenue, whatever has been collected), with L. Robert, *Chronos* 35 (1963) 54–57; J. and L. Robert, *Bull.Épigr.* (1963) 361; L. Robert, *StudClass* 16 (1974) 87–88; Gauthier, *Bull.Épigr.* (1988) 398; J. Tréheux, “Retour à Imbros et Samothraee”, *Hellenika Symneika* I (Nancy 1991) 143–149, esp. 147–149.

35 Cf. *I Delios* II 442.A.90–94 and 123–126; 106–109 and 129–132; 109–112 and 132–135.

36 18,560 dr. and 3,874 dr. $3\frac{10}{12}$ ob. in Posideion under Phôkaietos (90–97), and 18,560 dr. and 3,874 dr. $3\frac{10}{12}$ ob. in Posideion under Démareôs, but in both cases the latter deposits were *ἔκ τῶν ἀδοκασίων (vel sim.)*, not strictly part of the fund’s capital.

37 Larsen, *ESAR* IV 347, appears not to have noticed that the three banks handled the money in the same sealed jars, and so concluded “that the fund consisted of 55,680 drachmas and that not the purchasing but the sale of grain was distributed somewhat evenly throughout the year”.

38 *I Delios* II 442.A.91–92 + 125–126; 106–107 + 129–130; 110–111 + 133–134; 118–119.

39 On ἀνα- / δατάειν see Robert, *Nouv. Sardes* I 17; *Hell.* IX 14–18; Migeotte, *Cahiers Glotz* 2 (1991) 31; *idem*, “Le pain quotidien dans les cités hellénistiques: une affaire d’Etat”?, in: *Mélanges Ernest Pascal* [= *Cahiers des études antiques* 24] (Montreal 1990) 291–300, 297.

40 Reger, *ClAnt* 12 (1993) 322.

41 *I Delios* II 442.A.91–92; 106–107 (also 129–130); 110–111 (also 133–134); 118–119; 125–126.

42 The three designations appear to be variants of identical meaning, or, if there is a shade of difference, it is beyond our grasp.

43 Reger, *ClAnt* 12 (1993) 322.

ries together with any meaning, much less whether the result of such an operation suggests negative profitability.

But maybe there is a pattern in the data. The accounts report only two occasions on which regular deposits were accompanied by “undesignated funds”, 3,885 drachmas 3⁷/₁₂ obols in Poseidôn under Phôkaiens (90–97) and 3,784 drachmas 3⁷/₁₂ obols in Poseidôn under Dêmarrês (115–121). Perhaps in satisfaction of some operational rule, which is unknown to us, additional funds of roughly the same amount were deposited in the last month of the year. Anyway, it seems safe to consider it unlikely that someone predicted nine months in advance that grain-sales would result in a shortfall of 3,885 drachmas 3⁷/₁₂ obols. While we cannot reconstruct all the operational details from the accounts, there is nothing to indicate fiscal disaster. The accounts do not suggest that the *siônia*-fund experienced any shortfall in 179 BC, much less one of ca. 30 percent.

Reger concluded that annual losses of 25–30% were structurally integral to the Delian *siônia*-funds: “The most reasonable explanation of the loss is resale of grain at a discount of about 25 to 30 percent below market price.”⁴⁹ If the grain was sold at a discount we may assume that it was offered below current retail price, but *siôniai* with more than three talents in hand would have bought off the boat, at wholesale prices. The state could have sold below the prevailing retail price, yet above the price at which it had purchased the grain, and still turned a profit, or at least broken even.⁵⁰ There is no evidence of loss and no

49 Reger, *CAnt* 12 (1993) 323. Reger (319) argues that this money-losing institution was popular, suggesting that since two loans (of 17 attested loans, spanning the years 301–178) of roughly 50,000 drachmas were designated εἰς τὴν ἁρωγίαν (*LDelos* II 399, A.72 = 47,000; 442, A.127, 132, 139 = 55,680), all loans over 4,000 drachmas – six loans by this metric – were for the same purpose. But as we have seen, 442, A does not attest a loan of 55,680 drachmas, and the 4,000-drachma benchmark is not decisive: in 301 Delos borrowed 1,000 drachmas for the purchase of grain (*IG* XI 2146, A.20–21). There are other problems. The loan reported at *IG* XI 2148, 75–76 is presumed to be for *siônia* because it is “three times greater than the 4,000 maximum for loans for other purposes” (320). But if the number 4,000 has no external significance, how can multiples of it indicate anything? *IG* XI 2158, B.1–45 is taken (*ibid.*) to indicate a loan for *siônia* because it is “large” and was contracted in winter. But in 179 BC (442, A.122–140) *siôniai* purchased grain three times throughout the calendar year. The loans attested at *LDelos* I 354, 10–13 are assumed (*ibid.*) to be for *siônia* because their sums approximate 50,000 drachmas. This, in itself proves little (a car loan can approximate a home-improvement loan); in fact 354, 13 reads “W”, 10,000. *LDelos* I 362, A.11–14 records, as we have seen, disbursement to the *siônia* of 13,014 drachmas, not 38,152. Finally, *LDelos* II 443, A.b.30 records a deposit of 5,000 drachmas, not “50,000+”, εἰς τὴν ἁρωγίαν, line 36, not mentioned by Reger, records another deposit of 6,000 drachmas, for the same. We might imagine loans totaling roughly 50,000 drachmas in the huge lacunas. Perhaps six loans for *siônia* over more than a century constitute popularity but the data are less than conclusive.

50 A rolling *siônia*-fund from third-century Koroneia was used to purchase grain for sale at cut-rates, and its founder envisioned the possibility of profits: *SEG* XLIII 205, 24–29: ἐστὶ δὲ καὶ ἄρα τῶνδε λόγων ἡ πρόβλεψις πένδρα τὸν ὄφρον, ἔλλογιτῆρα δὲ μετὰ τῶν κοροϊστῶν τὸ συνουσιάζεσθαι ἀπὸ τῶς τιμῆς· καὶ εἰ μὲν καὶ τὸ μέγεθος τῶν ἐπιπραξαίων ἀγορῶν [ἔ]σται, καρβαλάδων δὲ τὸ τιμῆν πρᾶξιμα καὶ ἔστω οὗτο τῶς πῶλως καὶ οὐτῶς ἔστω ἐν τῶν Φυκοποιῶν. (Once they have sold all

way, on current data, to correlate alleged loss with whatever discounts the state may have offered.

Conclusion

If the Delian *siônia*-funds were resorted to often, in spite of the fact that their very structure ensured massive capital loss, then they would fit broadly with Reger’s conception of the economy of free Delos. If the island was not a great center for trade in grain, then the commodity would have been neither very plentiful nor very cheap. The frequent necessity of propping up supply would have conditioned Apollo’s functionaries and the citizens of Delos to accept the loss of more than half a talent of silver year after year. Reger suggests that by the third century Delos could afford large annual “outlays to make up the chronic cash shortfall” because that was when “the local economic scene picked up.”⁵¹ In prosperous times states are willing to subsidize food, but the accounts suggest that routine capital loss is a modern invention, not an ancient reality. Whether Reger’s complex and learned assessment of the Delian economy holds or not is a question beyond the scope of this brief note, but if it does stand, it will not be on the legs of the *siônia* fund. “Le dossier delien est réouvert, il n’est pas épuisé.”⁵²

Correspondence:

Prof Joshua D. Sosin
Department of Classical Studies
236 Allen Building
Box 90103
Duke University
Durham NC 27708-0103 USA

the grain they shall render an account with the overseers of the revenue gathered from the sale.

If there is more than seven hundred drachmas of silver [the amount of the principal] they shall turn it over immediately to the treasurer and this money shall belong to the city and shall be reserved for administration); see Migeotte, *Boeotia Antiqua* 3 (1993) 19 and n. 48 above.

51 Reger, *CAnt* 12 (1993) 328.

52 R. Etienne-V., *Sable, Topoi* 5 (1995) 555–560, at 560.