

50-53 FOUR RECEIPTS FOR TIN AND LEAD

Oxyrhynchus
No inv. nos.

AD c. 572

These four papyri were described as P. Oxy. VI 1000-3,¹ with only partial texts given; since P. Oxy. VI 915 (published in full) is similar in formula, was issued to the same man, and is in better condition, it was thought to be sufficient. This little archive has none the less a certain interest, and it seems useful to reassemble it with a commentary.

Each of the five receipts is written across the fibres on a rectangular piece of papyrus about 30 cm long, in three or four lines. The last line contained the date, but this is preserved only in 915, where the Oxyrhynchite era years, indiction, and day yield a date of 17 October 572. The other texts are no doubt roughly contemporaneous. The backs of 1002 (and apparently the others) are blank.

All of the receipts record the supplying of lead and tin (only tin in 1000) by a certain Apollos, *μολυβουργός*.² In only two cases (915 and 1001) is the recipient named (in both cases a Georgios), but in each case a space has been left into which the name could have been written. So far as I can see, no two of the hands are identical (1001 and 1002 are the two closest). The formula of the receipts is of the *ἐδόθησαν* type;³ it is sufficiently fossilized that the passive construction has sometimes been lost sight of, and the subjects of the verb appear in the accusative (in 1001; nominative correctly in 1002; in the others it is not written out) as if the verb had been *δέδωκεν* or some such transitive form.

The tin and lead in these texts were destined for repairs: in 915, to soldering the pipes of the suburban bath; in 1000, to repairing a cauldron in the landlord's market; in 1001 to caulking the seams of cooking utensils in the lord's household; in 1002 to repairing a pipe in the bath of the Great House; and in 1003 to repairing basins in the estate of Meskanounis. At least the last four of these are clearly Apionic, and if Georgios is the same in 915 and 1001, the inference that the entire group is connected to the Apion estate is confirmed.⁴

The principal interest of this small archive lies in the evidence for the activity of lead-workers. Lead and lead-workers appear in a fair number of papyri, but most are

¹ These papyri were distributed: 1000 is now in the Universitätsbibliothek, Graz; 1001 in the Oriental Institute of the University of Chicago; 1002 in the Papyrus Collection of the Columbia University Libraries; and 1003 in Special Collections, University Libraries, Case Western Reserve University. I am grateful to these institutions for permission to publish the texts in full here. Dr R. A. Coles kindly supplied photographs of 1000 and 1003, and the Oriental Institute of 1001.

² The papyri vacillate between the spellings *μολυβουργός* and *μολιβουργός*; in no case do we find *μολυβδουργός*, even though all except 915 spell *μόλυβδος* correctly with the delta.

³ There are many Oxyrhynchite examples, e.g. in P. Oxy. I 143-54 *passim* and XVI 2010-15. P. Oxy. 2013 and 2015 are particularly similar in form.

⁴ So one would suppose also from the discussion of suburban baths in E. R. Hardy, *The Large Estates of Byzantine Egypt* (New York 1931), 83-4. Cf. Hardy, 129-30, on baths in the Apion estate.

rather uninformative accounts or letters, where little sense of activities or uses can be extracted.¹ In this archive of Apollos, we find two uses connected to vessels for food and three to fixtures in the baths.² Baths, indeed, account for most of the identifiable activity in lead-working. One finds, for example, in P. Brem. 56 b. 2-6 the instructions *κέλευσον τοὺς μολιβδουργοὺς τοὺς ποιήσαντας τὸ βαλανίον ἐξελεῖν καὶ καπνίσαι αὐτό, ἵνα εἰς τρίτην δυνασθῶ[σι]ν* [; the lead-workers clearly have a role in construction beyond simply supplying the hardware (cf. Wilcken's note ad loc.). It is likely enough that Apollos had carried out the repairs mentioned in our papyri.³

In this connection SB VI 9368⁴ is of interest. Victor, the *περιχύτης* of the public bath at Oxyrhynchus, acknowledges to Phoibammon, superintendent for the wealthy landowner Anastasia, the receipt of 514 pounds of lead, evidently for major construction. The lead was delivered to Victor by Pamouthios the lead-worker, to whom it had been supplied by Anastasios, an employee of Anastasia. One supposes that Pamouthios himself provided it for pay, fashioned it into something usable, and installed it.⁵

Was Apollos an independent tradesman or an employee of the estate of the Apions?⁶ The receipts suggest some formal independence, but there can be no doubt that the Apion estate was his principal customer. This does not of itself indicate that he was an estate hand, however, for the Pamouthios, lead-worker, in SB VI 9368, supplying lead at the orders of Anastasia, appears in another document as surety to the heirs of Apion for one of their farmers.⁷ Clearly a craftsman might work for more than one large landowner.

¹ For a general discussion of the older evidence, see Th. Reil, *Beiträge zur Kenntnis des Gewerbes im hellenistischen Ägypten* (Borna-Leipzig 1913), 70-2.

² The *χαλκία* in 1003 are the basins of baths, even though this is not explicitly stated; cf. e.g. J. van Haelst, *CE* 33 (1958) 239 and P. Flor. III 384. 10.

³ In the rather different world of the first century, the lessee of a bathing establishment is himself to carry out (or be responsible for) any repairs, but the landlord is to supply the lead: P. Mich. V 312. 13, 35 (Theogonis, AD 34). Cf. also the lead for the *χαλκία* of the baths in P. Mich. I 65. 1, 5 and the order for payment from the third century P. Oxy. XLIV 3185 (for *κόλλησις* of the *σωλήνες*).

⁴ Published by J. van Haelst in *CE* 33 (1958) 237-42. I take 577/8 to be the probable date (cf. p. 240, 5 n.).

⁵ Van Haelst's analysis (241-2) of the transaction seems to me quite misguided. In a large estate it is natural that the chief superintendent will have subordinates to carry out orders and deal with tradesmen; one is hard-put to find a 'bureaucratie nombreuse et spécialisée' in these two men, and the lead-worker and bath-attendant have nothing to do with Anastasia's estate personnel. It is not demonstrated that all of the paperwork outlined (p. 241) will have existed in any one case, and even so it does not seem excessive. One may well ask how else such transactions could have been carried out.

⁶ Cf. I. F. Fikhman, *Jb. f. Wirtschaftsgeschichte* 1969, iv, 149-71 at p. 170 for the distinction.

⁷ P. Oxy. I 135; cf. *CE* 33 (1958) 240, 5 n.

50 (=P. Oxy. VI 1000)

26.9×6.3 cm

[+ ἐδόθ(ησαν) δι(ὰ)] Ἀπολλῶ μολυβουργ(οῦ) *vacat* ± 5 εἰς διόρθωσι(ν) τοῦ
λέβυτος τοῦ γεουχικ(οῦ) μακελλαρ(ίου) ὑπὸ

[± 15] Πέτρ(ου) κασιδηρ(ίου) λίτρ(αι) τέσσαρες, γί(νονται) κασι-
δηρ(ίου) λί(τραι) δ μό(ναι).

3 [Date ± 29] *vacat*

1 . λέβητος; ὑπο 2 l. κασιτερίου

'Supplied by Apollos, lead-worker, for the restoration of the cauldron of the landlord's food market under [] of Peter, four pounds of tin, total 4 lb. of tin only . . .' (Date lost).

1 Cf. P. Mert. II 96. 4 n. for the almost technical use of γεουχικός in this period to refer to the 'Great House' of a large landowner. This papyrus is apparently unique in using μακελλάριον as the equivalent of the Latin *macellum*, in place of the usual μακέλλον: cf. LSJ s.v. and S. Daris, *Il lessico latino nel greco d'Egitto* (Barcelona 1971), 71 s.v.

2 The lacuna probably contained the name of the person in charge of the *macellum*; what part in this phrase Πέτρ(ου) (if rightly read) plays, I cannot say. The diminutive form κασιτέριον (so spelt by Grenfell and Hunt; Preisigke, *WB* I s.v., has κασιτήριον) does not appear in LSJ or Suppl. (1968).

51 (= P. Oxy. VI 1001)

31.8×8.7 cm

+ ἐδόθ(ησαν) δι(ὰ) Ἀπολλῶ μολυβουργ(οῦ) *vacat* ± 13 Γεωργίῳ γαστρι(ῶ)
εἰς μότωσι(ν) τῶν μαγειρικ(ῶν)

κκε[υ]φ[υ] τοῦ δεσπ(ότου) ἡμῶν τοῦ κυροῦ κασιδηρίου λίτρας ἕξ καὶ μολύβδου
λίτρας τέσσαρες,

[γί(νονται) κασιδηρίου] λί(τραι) 5 καὶ μολύβδ(ου) λί(τραι) δ μ(όναι). (m. 2)
γί(νονται) κασιδηρί(ου) λίτρ(αι) ἕξ καὶ μολύβδου λί(τραι) τέσσαρες. +

4 [Date ± 33] *vacat*

1 l. μολυβουργ(οῦ), καστρη(ῶ), μότωσι(ν) 2 l. κυρίου, κασιτερίου; μολύβδου 3 l. κασιτερίου; μο of second μολύβδου corrected (from κα?)

'Supplied by Apollos, lead-worker, to Georgios, *castrensis*, for the caulking of the cooking equipment of our master the lord, six pounds of tin and four pounds of lead, total 6 lb. of tin and 4 lb. of lead only. (2nd hand) Total six pounds of tin and four lb. of lead . . .' (Date lost).

1 One is tempted to suppose that Georgios is the same as the παῖς of P. Oxy. VI 915. This evident instance of *castrensis* is cited by Daris, *Il lessico latino*, 51 and by F. T. Gignac, *A Grammar of the Greek Papyri of the Roman and Byzantine Periods* I (Milan 1976), 117. μότωσις is found only here in the papyri, though LSJ have two citations which they render as 'dressing with lint', certainly not the meaning here. Grenfell and Hunt cite P. Lond. III 1177. 295 for μότωμα, meaning 'tow' used in soldering. *WB* I s.v. μότωσις, defines the word as caulking seams with tow or oakum; but as tin and lead are being supplied here, one supposes that a soldering operation with the metals is intended. μοτοποιός in P. Got. 19. 4, 5 is a hapax in an uninformative context.

2 For *κυροῦ* cf. e.g. P. Oxy. VI 998, certainly with reference to the Apions. Gignac, *Grammar*, 302, discusses this phonetic phenomenon, accenting as a perispomenon equivalent to [kyrjú]. Although the papyrus is damaged here, it does not seem possible that an iota was written.

3 This double totalling is unique in our group.

52 (= P. Oxy. VI 1002)

31.1 × 5.8 cm.

+ ἐδόθ(ησαν) δι(ὰ) Ἀπολλῶ μολιβουργ(οῦ) *vacat* ± 15 εἰς διόρθ(ωσαν) τοῦ
 σωλῆν(ος) λεγομ(ένου) Καβητ() τοῦ λουτρ(οῦ)
 τῆς μεγάλ(ης) οἰκ(ίας) εἰς ἐπιβουλ.[± 16]λην() μολύβδου λίτραι
 ὀκτώ καὶ κασιδηρίου

3 [λίτραι --, γί(νονται) μολύβδ(ου) λί(τραι) η καὶ κασιδ(ηρίου) λί(τραι) --. Date
 ± 17]//

1 I. μολιβουργ(οῦ); Καβητς

2 I. κασιτερίου

'Supplied by Apollos, lead-worker, for the restoration of the pipe called Sabet() of the bath of the Great House for . . ., eight pounds of lead and . . . of tin . . .' (the rest is lost).

1 Preisigke, *BL* I 390, proposed λέβητ(ος) for Grenfell and Hunt's Καβητ(), and he entered *ωληνικὸς λέβης* in *WB* II 565 in consequence. But the reading Καβητς is certain, and the *WB* entry is to be struck out. I have not seen another example of giving a name to a pipe, although names for irrigation machines are common, especially on Apion estates (e.g. P. Lond. III 776. 8 [p. 278]). For the bath of the Great House, cf. e.g. P. Oxy. I 148.

2 I do not know what ἐπιβουλ. [can refer to; all words with this beginning seem to be distinctly unfavourable in connotation. At the end of the lacuna, perhaps σω]λην().

53 (= P. Oxy. VI 1003)

29.4 × 6.4 cm

+ ἐδόθ(ησαν) δι(ὰ) Ἀπ[ο]λλ[ῶ] μολιβουργ(οῦ) *vacat* ± 7 εἰς διόρθωσι(ν) τῶν
 χαλκίων τοῦ κτήμ(ατος) Μεσκανούνεωσ
 [μολύβδ(ου)] λίτρ(αι) ὀκτώ καὶ κασιδηρ(ίου) λίτρ(αι) τέσσαρες, γί(νονται)
 μολύβδ(ου) λίτρ(αι) η καὶ κασιδηρ(ίου) λί(τραι) δ μ(όναί).

3 [Date ± 38] *vacat*

1 I. μολιβουργ(οῦ)

2 I. κασιτερ(ίου)

'Supplied by Apollos, lead-worker, for the restoration of the basins of the estate of Meskanounis, eight pounds of lead and four pounds of tin, total 8 pounds lead and 4 lb. tin only . . .' (Date lost).

1 For Meskanounis see *WB* III 312; it appears often in the papyri connected with the Apion estate, cf. Hardy, *Large Estate*, 73 n. 1.

2 The abbreviation stroke of μολύβδ(ου) is visible just after the lacuna, made in the same way as later in the line with this word.