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## SB I 5224: a Re-edition

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## Household Accounts: SB I 5224 Revised

SB 26.16577

P.Hawara inv. 245=  
SB I 5224\*

10.6 cm x 44.6 cm

I/II C.E.

Provenance Unknown

Below we publish a new, revised text of an account of expenses, long known and cited as P.Hawara inv. 245 = SB 5224. The papyrus is now P.Yale inv. 19 (see *P.Yale II*, p. xvi). Our revision of this text originated in an attempt to verify the supposed reading in the papyrus of the rare word ἐπιούσιος, well known from the Lord's Prayer, but in documents supposedly attested only in this text. That check (with a negative result; see M. Nijman and K. A. Worp, "An Attestation of N.T. ΕΠΙΟΥΣΙΟΣ in a Documentary Papyrus?" *Novum Testamentum* 41 [1999] 231-4) was made on the basis of a xerox of the text provided by A. Crislip to K.A. Worp. At the same time it was noticed that the first edition was not up to modern standards and contained many mistakes and errors. We therefore undertook a complete re-edition of the text. This was based initially on several visits to New Haven by R.S. Bagnall; work on the text was completed together during a visit by Worp in July, 1999.

Instead of the separate line count in each column printed in the *ed.pr.*, we have used a continuous line count. We have also replaced the conventions of the first edition with standard Leiden Convention practice. (Most importantly, the original editor used square brackets where today we use round ones to mark abbreviations.) Finally, we note that after line 3 there is only one lost line, rather than the two indicated in the *ed.pr.*; consequently, lines 6 and following in the *ed.pr.* are numbered below as lines 5 ff.

As was noted already in the article by Nijman and Worp referred to above, the first editor of the text, A.J. Sayce, wrote in 1889: "English housekeepers may be interested in knowing what was the daily expenditure of an Egyptian official some fourteen

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\* For an image see <http://inky.library.yale.edu/papyring/Z4183627.jpg>

hundred years ago;" later scholars assumed, therefore, that the papyrus dates from the fifth century of our era. The text's handwriting, however, is that of a documentary hand of the first to second century. In fact, drachmas and obols do not occur as late as the fifth century C.E.; cf. the observations made in *ZPE* 90 (1992) 234-5 and in *P.Kell.* I Gr. 28.4n.

The text apparently is an account of daily expenses for various commodities and other purposes. Unfortunately, however, the correct and full understanding of the opening lines of the text, esp. lines 2-4, is anything but clear to us. On Mecheir 19 (cf. line 1), apparently, after presenting some arithmetical calculations adding and subtracting amounts of drachmas, a scribe wrote an itemized account concerning expenses made previously for purchasing various commodities in the period Mecheir 1-18. The part of the account containing expenses made for Mecheir 9-12 is apparently lost in the part of the papyrus which has broken off at the bottom of column 1.

The dimensions of the surviving sheet are 10.6 wide by 44.6 cm high. It is made up of two pieces, the first 33.5 cm high, to the bottom of which was attached a second piece 11.1 cm high. The first column extends to both pieces, while the second ends at the border between the first and the second pieces. The sheet was turned so that the writing runs lengthwise across the fibers. The margin at the left averages 1.3 cm (day numbers project to the left in the margin), that at the right 2.0 cm.

On the back of the account there are many offsets of letters; these are the mirror images of letters belonging to another account which is now lost. Taking these into account together with the orientation of the writing, it seems to us most likely that the present papyrus was fashioned by gluing together two pieces of unwritten or almost unwritten papyrus from already-used rolls. Why the writer chose to write across the fibers and with the long dimension of the papyrus oriented vertically, we do not know.

	Μεχειρ ιϚ̄		
	ἔσχεσ (δραχμάς) κ καὶ παραβε( ) (δρ.) μ καὶ παρ( ) (δρ.)		
	κ .		
	ὄμ(οίως) κα ( ) (δρ.) δ ... αὶ ὄμ(οίως) (δρ.) ιδ (δρ.) η		
	(γίν.) (δρ.) ϑβ (πεντώβ.)		
4	.. δρ ... τος		
	περρέου (δρ.) α [διώβ.] (τετρώβ.) (ήμοβ.)		For perseia fruit (?), 1 dr. 4.5 ob.
	χαρταρίου (τετρώβ.)		For papyrus, 4 ob.
	λ . αμ . (τετρώβ.)		For --, 4 ob.
8	ἥπατος (διώβ.)		For liver, 2 ob.
	β̄ ἔρεβί(ν)θ(ων) (διώβ.)		On the 2 <sup>nd</sup> , for chick-peas, 2 ob.
	καλα(μ ) (διώβ.)		For --, 2 ob.
	ἐλαίου (τριώβ.)		For oil, 3 ob.
12	κνάμ(ου) (τριώβ.)		For beans, 3 ob.
	καλα(μ ) (ὀβ.) (ήμοβ.)		For --, 1.5 ob.
	(γίν.) (δρ.) α (τετρώβ.) (ήμοβ.)		Total 1 dr. 4.5 ob.
	γ κρέος (δρ.) α (ὀβ.)		On the 3 <sup>rd</sup> , for meat, 1 dr. 1 ob.
16	κεφαλ( ) (ὀβ.)		For head --, 1 ob.
	σαγμ( ) (ὀβ.)		For --, 1 ob.
	ἄρτιδ(ίων) (ὀβ.)		For bread, 1 ob.
	ἔρεβί(ν)θ(ων) (τετρώβ.)		For chick-peas, 4 ob.
20	καλαμ( ) (διώβ.)		For --, 2 ob.
	ἐλαίου (τριώβ.)		For oil, 3 ob.
	(γίν.) (δρ.) β ζ (ὀβ.)		Total 2 dr. 6 ob.
	δ̄ κρέος (δρ.) α (ὀβ.)		On the 4 <sup>th</sup> , for meat, 1 dr. 1 ob.
24	ἔρεβί(ν)θ(ων) (τετρώβ.)		For chick-peas, 4 ob.
	καλαμ( ) (διώβ.)		For --, 2 ob.

		άρτιδ(ίων)	(ὄβ.)	For bread, 1 ob.
		γλυκ( )	(ήμιοβ.)	For must (?), 0.5 ob.
28		καλα(μ )	(ήμιοβ.)	For --, 0.5 ob.
		ξύλ[ο]υ	(ὄβ.)	For wood, 1 ob.
		ἀγγειδ(ίου)	(ήμιοβ.)	For a small jar, 0.5 ob.
		σεμιδ(άλεωσ)	(ὄβ.)	For wheaten flour, 1 ob.
32		έλαιου	(τετρώβ.)	For oil, 4 ob.
		[[γίν.)	(δρ.) γ]	[Total 3 dr.]
		(γίν.)	(δρ.) γ (διώβ.)	Total 3 dr. 2 ob.
	ε <sup>-</sup>	κρ[έ]σς	(δρ.) α (ὄβ.)	On the 5 <sup>th</sup> , for meat, 1 dr. 1 ob.
36		ἀμμηγ(ίας)	(τριώβ.)	For sebakh transport, 3 ob.
		λαχά(νων)	(ὄβ.)	For vegetables, 1 ob.
		καλα(μ )	(διώβ.)	For --, 2 ob.
		χύτρα(ς)	(ὄβ.)	For an earthen pot, 1 ob.
40		άλμ(υρίδος)	(ήμιοβ.)	For pickle, 0.5 ob.
		άρτιδ(ίων)	(ὄβ.) (ήμιοβ.)	For bread, 1.5 ob.
		ἐρεβί(ν)θ(ων)	(τριώβ.)	For chick-peas, 3 ob.
		έλαιου	(τριώβ.)	For oil, 3 ob.
44		(γίν.)	(δρ.) γ (διώβ.)	Total 3 dr. 2 ob.
	ς	ὀρνείθ(ων)	(δρ.) δ	On the 6 <sup>th</sup> , for fowl, 4 dr.
		κρέος	(δρ.) α (ὄβ.)	For meat, 1 dr. 1 ob.
		άλμ(υρίδος)	(τετρώβ.)	For pickle, 4 ob.
48		κεφαλ( )	(ὄβ.)	For head --, 1 ob.
		ἀρσενικ(οῦ)	(τετρώβ.)	For arsenic, 4 ob.
		καλα(μ )	(διώβ.)	For --, 2 ob.
		άρτιδ(ίων)	(ὄβ.)	For bread, 1 ob.
52		ᾠῶν	(ὄβ.) ς	For eggs, 6 ob.
		ἐρεβί(ν)θων	(τριώβ.)	For chick-peas, 3 ob.
		έλαιου	(τριώβ.)	For oil, 3 ob.
		ἐμοί	(τετρώβ.)	For myself, 4 ob.

56	ζυμαίου	(ήμιοβ.)	For --, 0.5 ob.
	....	(ήμιοβ.)	For --, 0.5 ob.
	ζύτου	(ήμιοβ.)	For beer, 0.5 ob.
	(γίν.) (δρ.) θ (διώβ.) (ήμιοβ.)		Total 9 dr. 2.5 ob.
60	Ξ	άρτων ... ( ) (δρ.) δ	On the 7 <sup>th</sup> , for -- bread, 4 dr.
	σαγμ( ) ...	(δρ.) δ	For --, 4 dr.
	κυμβολ( ) κομ( )	(δρ.) δ	For --, 4 dr.
	κρέος	(δρ.) α (όβ.)	For meat, 1 dr. 1 ob.
64	όψαρίου	(δρ.) α (όβ.)	For fish, 1 dr. 1 ob.
	κεφαλ( )	(ήμιοβ.)	For head --, 0.5 ob.
	έρακου	(διώβ.)	For wild chickling, 2 ob.
	λαχά(ων)	(όβ.)	For vegetables, 1 ob.
68	οιάλου	(διώβ.)	For glass, 2 ob.
	έλαιου	(τριώβ.)	For oil, 3 ob.
	(γίν.) (δρ.) ις (τριώβ.) (ήμιοβ.)		Total 16 dr. 3.5 ob.
	η	κρέος	(δρ.) α (όβ.) On the 8 <sup>th</sup> , for meat, 1 dr. 1 ob.
72	όψαρίου	(δρ.) α (όβ.)	For fish, 1 dr. 1 ob.
	άσπαρ(άγου)	(διώβ.)	For asparagus, 2 ob.
	καλαμ( )	(διώβ.)	For --, 2 ob.
	κυάμο(ν)	(ήμιοβ.)	For beans, 0.5 ob.
76	έλαιου	(τριώβ.)	For oil, 3 ob.
	έρεβί(ν)θ(ων)	(τριώβ.)	For chick-peas, 3 ob.
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<b>Col. II</b>			
	ιγ	[...]	(τετρώβ.) On the 13 <sup>th</sup> , for --, 4 ob.
		[έ]λ[αί]ου	(τετρώβ.) For oil, 4 ob.
80	έρεβί(ν)θ(ων)	(διώβ.)	For chick-peas, 2 ob.
	καλ(αμ )	(διώβ.)	For --, 2 ob.
	κεφ(αλ )	(όβ.)	For head --, 1 ob.
	(γίν.) (δρ.) α, ς (όβ.)		Total 1 dr. 6 ob.

84	ιδ	... [ ]	(δρ.) α (όβ.)	On the 14 <sup>th</sup> for --, 1 dr. 1 ob.
		οίνου	(δρ.) α (όβ.)	For wine, 1 dr. 1 ob.
		έρεβί(ν)θ(ων)	(διώβ.)	For chick-peas, 2 ob.
		καλα(μ )	(διώβ.)	For --, 2 ob.
88		έλαιό(υ)	(τριώβ.)	For oil, 3 ob.
		(γίν.)	.....	Total (?) -
	ιε	έλαιου {ο} [μ (πεγγοβ.)]	(όβ.) ζ	On the 15 <sup>th</sup> for oil, 6 (<5) ob.
		έρεβ(ίνθων)	(διώβ.)	For chick-peas, 2 ob.
92		καλ(αμ )	(διώβ.)	For --, 2 ob.
		άρτιδ(ίων)	(όβ.)	For bread, 1 ob.
		(γίν.) (δρ.) α, (τετρώβ.)		Total 1 dr. 4 ob.
	ις	κρέος	(δρ.) α (όβ.)	On the 16 <sup>th</sup> , for meat, 1 dr. 1 ob.
96		έρεβί(ν)θ(ων)	(διώβ.)	For chick-peas, 2 ob.
		άρτιδ(ίων)	(όβ.)	For bread, 1 ob.
		σεύτ(λων)	(ήμοβ.)	For beets, 0.5 ob.
		καλα(μ )	(διώβ.)	For --, 2 ob.
100		έλαιου	(πεγγοβ.)	For oil, 5 ob.
		(γίν.) (δρ.) β, (τετρώβ.)	(ήμοβ.)	Total 2 dr. 4.5 ob.
	ιζ	κρέος	(τετρώβ.)	On the 17 <sup>th</sup> , for meat, 4 ob.
		όψαρ(ίων)	(τετρώβ.)	For fish, 4 ob.
104		έρεβί(ν)θ(ων)	(διώβ.)	For chick-peas, 2 ob.
		άρτιδ(ίων)	(όβ.)	For bread, 1 ob.
		καλαμ( )	(διώβ.)	For --, 2 ob.
		έλαιου	(τετρώβ.)	For oil, 4 ob.
108		στεφαν( )	(διώβ.)	To Stephanos (or for a crown), 2 ob.
		(γίν.) (δρ.) β (πεντώβ.)		Total 2 dr. 5 ob.
	ιη	καλαμ( )	(διώβ.)	On the 18 <sup>th</sup> , for --, 2 ob.
		έρεβί(ν)θ(ων)	(διώβ.)	For chick-peas, 2 ob.
112		άρτιδ(ίων)	(όβ.)	For bread, 1 ob.

ἐλαίου (τριώβ.) For oil, 3 ob.  
 (γίν.) (δρ.) α (ὀβ.) Total 1 dr. 1 ob.

2 (δρ.) μ: μ prob. ex λθ 6 *Ed.pr.*: χάρτου 7 *Ed.pr.*: κισαμω[ν] 8 *Ed.pr.*: (ὀβ.) 9 *Ed.pr.*: ἐρεβίνθ[ων] 13 *Ed.pr.*: (τριώβ.) 14 *Ed.pr.*: (δρ.) κε (δρ.) 15 et alibi: 1. κρέως; *Ed.pr. om.* (ὀβ.) 17 *Ed.pr.*: [ ] 18 *Ed.pr.*: ἀλήατος 19 *Ed.pr.*: ἐρεβίνθ[ων] 22 *Ed.pr.*: (δρ.) κη (ὀβ.) 23 *Ed.pr. om.* (ὀβ.) 24 *Ed.pr.*: ἐρεβίνθ[ων] 27 *Ed.pr.*: γλιμ. 29 *Ed.pr.*: [ ], .5 ob. 30 *Ed.pr.*: ... 31 *Ed.pr.*: κυκεῖα 33 *Ed.pr. om.* [ ] 35 *Ed.pr.*: ὀρ[νεῖθειων] 36 *Ed.pr.*: δαπάνη[ς] [1.5 ob.] 37 *Ed.pr.*: χαρτιδ[ίου] 40 *Ed.pr.*: ἀλός 41 *Ed.pr.*: ἀλή[ατος], (ὀβ.) 42 *Ed.pr.*: ἐρεβίνθ[ων] 45 *Ed.pr.*: ὀρνεῖθ[εων] 47 *Ed.pr.*: ἀλός, (τριώβ.) 49 *Ed.pr.*: ἀρτυτικ[ῶν], (τριώβ.) 50 *Ed.pr.*: (ὀβ.) 51 *Ed.pr.*: (διώβ.) 52 *Ed.pr.*: (ὀβ.) (ἡμοβ.) 53 *Ed.pr.*: ἐρεβίνθ[ων] 56 *Ed.pr.*: ζωαρι[ου] (= "for a pet-dog;" SB I 5224: ζωαρι[ων]), γ 57 *Ed.pr.*: ὁ ἄμα (= "the man with it") 58 *Ed.pr.*: ὄνου 59 *Ed.pr.*: (δρ.) ιβ 60 *Ed.pr.*: [ ] 61 *Ed.pr.*: σαγερ[όρου] 62 *Ed.pr.*: κυλλογ[ῆς] κίλ[λων] 64 First o corr. ex α 66 l. ἀράκου; *Ed.pr.*: ἐρεβ[ίνθων] 68 l. ὑάλου; *Ed.pr.*: [ς]ιάλου 70 *Ed.pr.*: (δρ.) ις, (τετρώβ.) 78 *Ed.pr.*: (ὀβ.) 79 *Ed.pr.*: ἐλαίου (τριώβ.) 80 *Ed.pr.*: ἐρ[ε]βί[νθων] 83 *Ed.pr.*: (δρ.) α (ὀβ.) (ἡμοβ.) 85 *Ed.pr.*: οἶνο[υ] (δρ.) γ (SB I 5224: =) 86 *Ed.pr.*: ἐρεβ[ίνθων] 87 *Ed.pr.*: κα[λάμων] 89 *Ed.pr.*: // κη (?) 90 *Ed.pr.*: ἐπιουσι[ων] 91 *Ed.pr.*: ἐρεβ[ίνθων] 95 *Ed.pr.*: κείλο[υ] 96 *Ed.pr.*: ἐρεβ[ίνθων] 98 *Ed.pr.*: σεύτ[λου] 100 *Ed.pr.*: ὀρύζας 102 *Ed.pr.*: κείλο[υ] (τριώβ.) 103 *Ed.pr.*: ὀρύζας 104 *Ed.pr.*: ἐρεβ[ίνθων] 107 *Ed.pr.*: (τριώβ.) 111 *Ed.pr.*: βρώμα[τος] 114 *Ed.pr.*: (διώβ.)

We give below in alphabetical order a table of the objects of expenditure, indicating on which days they are found, followed by line references. Following that are notes on some of the items in this alphabetical list.

Product	Day(s) of recorded expenditure	Line(s)
ἀγγεῖδιον	4	30
ἀλμυρίς	5, 6	40, 47
ἀμμηγία	5	36
ἄρακος	7	66
ἀρτίδιον	3, 4, 5, 6, 15, 16, 17, 18	18, 26, 41, 51, 93, 97, 105, 112
ἄρτος . . . ( )	7	60
ἀρσενικόν	6	49
ἀσπάραγος	8	73
γλυκ( )	4	27

έλαιον	2, 3, 4, 5, 6, 7, 8, 13, 14, 15, 16, 17, 18	11, 21, 32, 43, 54, 69, 76, 79, 88, 90, 100, 107, 113
ἐγώ (ἐμοί)	6	55
ἐρέβινθος	2, 3, 4, 5, 6, 8, 13, 14, 15, 16, 17, 18	9, 19, 24, 42, 53, 77, 80, 86, 91, 96, 104, 111
ζιμαίου	6	56
ζῦτος	6	58
ἦπαρ	1	8
καλαμ(στόμος ?)	2 (2x), 3, 4 (2x), 5, 6, 8, 13, 14, 15, 16, 17, 18	10, 13, 20, 25, 28, 38, 50, 74, 81, 87, 92, 99, 106, 110
κεφαλ( )	3, 6, 7, 13	16, 48, 65, 82
κρέας	3, 4, 5, 6, 7, 8, 16, 17	15, 23, 35, 46, 63, 71, 95, 102
κύαμος	2, 8	12, 75
λάχανον	5, 7	37, 67
ξύλον	4	29
οἶνος	14	85
ὄρνις	6	45
ὀψάριον	7, 8, 17	64, 72, 103
πέρρειον	1	5
σαγμα( )	3, 7	17, 61
σεῦτλον	16	98
στεφαν( )	17	108
σεμίδαλις	4	31
συμβολ( ) κομ( )	7	62
ύαλος	7	68
χαρτάριον	1	6
χύτρα	5	39
ψόν	6	52
...	1, 6, 13, 14	7, 57, 78, 84

Most of the expenses turn out to have been made for purchasing various kinds of foodstuff (on which, in general, cf. J. Wilkins et al. *Food in Antiquity* [Exeter 1995]), but there also expenses for buying commodities like glass, wood, buckets, papyrus, for paying services like the transport of sebakh (ἀμμηγία), and expenses of a more or less personal nature (cf. line 55, "to myself;" cf. line 108, where one might translate "to Stephanos").

Various agricultural products mentioned in this list are well known; cf., e.g., M. Schnebel, *Die Landwirtschaft im hellenistischen Ägypten* (Munich 1925) 185 ff. (for ἀρακος = "wild chickling"), 189 (for ἐρέβινθος = "chick-pea"), 186 and 193 (for κύαμος = "bean"), 210 (for λάχανον = "vegetables"). Apparently, Schnebel does not discuss the term σεῦτλον (τεῦτλον) = "beet," though already in his time beets were mentioned in two published papyri (i.e. *BGU IV* 1120.12 and *P.Lond.* III 964.12 [pp. 211-2]). Later came *P.Mich.* VIII 496.16 and XI 619.2, 3, 25, 26; *P.Ross.Georg.* III 44.4; *P.Sarap.* 66.19; *SB XVI* 12515.20, *O. Berenike* I 87.7, and *O.Claud.* I 150.3; cf. also the diminutive form σεύτλιον in *P.Cair.Zen.* IV 59608.26 and 59702.26; *P.IFAO* III 37.32, and *P.Ryl.* IV 639.98).

Apparently there is no specific papyrological monograph on the production and consumption of proteins in the form of fish (ὀψάριον), meat (κρέας), fowl/poultry (ὄρνις) or eggs (φά). In general, see J. Wilkins, *op.cit.*, Part 2, 102-70; for the subject of fowl (ὄρνις), see Schnebel, *op.cit.*, 341. On the other hand, on various aspects of vine growing in the papyri there is a vast literature; for basic facts, see Schnebel, *op.cit.*, Sachregister s.v. "Weinbau" (p. 364). More recent literature can be found in E. Jakob, "Guarantee and Jars in Sales of Wine on Delivery," *JJP* 29 (1999) 22-44, and E. Kislinger, "Zum Weinhandel in frühbyzantinischer Zeit," *Tyche* 14 (1999) 141-56. For the terminology found in our text related to various types of wheat used for bread making and baking, see E. Battaglia, *Artos. Il lessico della panificazione nei papiri greci* (Milano 1989), passim, and in particular pp. 73 s.v. ἀρτίδιον, 248 s.v. ἄρτος, 251 s.v. σερμίδαλις. For ἐλαιον = "oil," see D. Brent Sandy, *The Production and Use of Vegetable Oils in Ptolemaic Egypt*. BASP Suppl. 6 (Atlanta 1989).

Often the same (or almost the same) amount of expenditure for a certain commodity is recorded throughout the account, e.g.:

ἀρτίδιον = "bread" usually costs 1 ob., except in l. 41 (day 5): 1.5 ob. At the same time note l. 60, 4 dr. for some type of ἄρτος.

ἐλαιον = "oil" usually costs 3 ob., except in lines 32, 79, and 107 (4 ob.), while 5 ob. are indicated in l. 100 and even 6 ob. (corrected from 5 [?] ob.) in l. 90.

ἐρέβινθος = "chick-peas" cost 2 ob. in ll. 9, 80, 86, 91, 96, 104, 111; 3 ob. in ll. 42, 53, 77; 4 ob. in ll. 19, 24.

κρέας = "meat" usually costs 1 dr. 1 ob., but in l. 102 only 4 ob., i.e. half the regular price. Given the fact that payments of 1 dr. 1 ob. for meat are often recorded as the first entry for any specific day (cf. ll. 15, 23, 35, 71, 95, 102; only during days 6 and 7, ll. 46, 63, does meat not occur in the first place), one may perhaps restore some form of κρέας (abbreviated?) in ll. 78 (expense of 4 ob.) and 84 (expense of 1 dr. 1 ob.); but these restorations are completely hypothetical.

λάχανον = "vegetables" costs, on the two occasions that the item occurs (ll. 37, 67), 1 ob.

ὄψαριον = "fish" yields prices at the same level as κρέας; ll. 64 and 72 record expenses at 1 dr. 1 ob., but l. 103 has a payment of 4 ob. (we have restored the abbreviated noun as plural here).

For the other expenses we have fewer steady price indications or the nature of the expenditure is uncertain. ἀλμυρική = "pickle" (in l. 40; cf. l. 57n.) costs 0.5 ob. in l. 40, 4 ob. in l. 47; we may be dealing with varying quantities costing varying amounts of money. Likewise, for κύαμοι = "beans" there is no fixed amount per purchase; cf. ll. 12 (day 2): 3 ob., and 75 (day 8): 0.5 ob.

On the other hand, expenses made for καλ( ) / καλα( ) / καλαμ( ) are quite frequent, in fact on almost a daily basis (for the moment the entries of days 9-12 are lost, and there is no entry for this purpose under day 7). Usually, the category costs 2 ob., except in ll. 13 (1.5 ob.) and 28 (0.5 ob.); in both cases an additional payment of 2 ob. is recorded for the same days (2 and 4). The question is how the abbreviation should be resolved. If one restores κάλαμος = "reeds," one has to assume that for some unspecified use reeds were bought on a daily basis, but that does not seem likely. At any rate, the use of reeds for human consumption is apparently not recorded in Egypt (for India, however, see Aelian, *Var.Hist.* III 39). Likewise, a resolution of, e.g., καλαμαία = "grasshopper" does not seem really attractive ("2 ob. per diem for breaded grasshoppers"?). More likely

seems the assumption that in this case one is dealing with daily payments of wages to, e.g., a *καλαμοτόμος* (= "reed cutter") or a *καλαμουργός* (= "reed worker;" cf. *καλαμουργία*, *καλαμουργέω*). That, however, provokes the counter-argument that these substantives are not (or are scarcely) attested to date.

Likewise, the meaning of the category *κεφαλ* ( ) is not clear; Preisigke, *WB I* s.v. *κεφαλή* interprets that noun's occurrence in this list as "Tierkopf für Speise," but—depending upon one's talents for constructing an imaginative scenario (e.g.: *κεφαλαλγίας* = "for a headache" ?)—any word beginning with *κεφαλ-* (cf. *LSJ* 944-6) can be considered. For this category we find expenses of 1 ob. three times (ll. 16, 48, 82) versus 0.5 ob. only in l. 65.

For all these price indications in general, see H.J. Drexhage, *Preise, Mieten/Pachten, Kosten und Löhne im Römischen Ägypten* (St. Katharinen 1991) *passim*. The present papyrus is referred to there as "P.Hawara 245" (see the index of papyri used, p. 480; there is no reference to *SB I 5224*).

### Notes on particular lines

2 After "you got 20 drachmas" the meaning is unclear. Nor is it evident who the "you" of *ἐσχες* is.

4 We have considered reading *ἀνδριάντος*, but the first alpha would be really difficult and the other letters are not very convincing either. To be sure, a reading *τοῦ δράκοντος* seems equally problematic.

5 No indication of the first day ( $\alpha$ ) of the month of Mecheir is visible, but this is possibly due to seriously damaged ink.

As the omission of an intervocalic iota should not pose a real problem, our reading *περσειου* would seem compatible with the genitive of the noun *πέρσειον* = "fruit of the persea tree." It is, however, true that 1 dr. 4.5 ob. is a lot of money for purchasing fruit.

6 For all kinds of aspects of the papyrus plant and its various uses, particularly as writing material (*χαρτάριον*), the classic discussion remains that of N. Lewis, *Papyrus in Classical Antiquity* (Oxford 1974); for *χαρτάριον*, see esp. 77 ff. A supplement to this

appeared as *Pap.Brux.* 23 (Brussels 1989); for χαρτάριον, see esp. 34.

7 At first we thought about reading κῡαμίου, the genitive of the diminutive form of κύαμος (attested in Greek only rarely; cf. *LSJ* s.v.), but we are not comfortable with it. Likewise, comparing Lat. "salgammum" we considered reading ζαλγαμι- (-λγ- being a slightly more attractive reading than the upsilon of κῡαμι-), but we are not satisfied with the reading of the first two letters as ζα-. At the end of the word one may read -κ( ) practically as well as an open -ω.

8 There is no day total indicated after this line, as there is for the other days.

14 For accounting purposes (additions) throughout this text use is made of a "7-obol" drachma. This is a practice applied when it is necessary to convert bronze single drachmas of 6 obols into tetradrachms of "silver," which are generally calculated as having 28 or 29 obols, i.e. with an agio vs. the bronze currency unit. For this subject, see now K. Maresch, *Bronze und Silber*. *Pap.Col.* 25 (Opladen 1996) 112 ff.

17 We cannot say whether we are dealing with κάγμα (= "saddle") or one of its compounds. The word also occurs in l. 61. The very different amounts (1 ob. and 4 dr.) might not encourage the notion that we are dealing with commensurate goods, and it may be that one or both of these payments were made to saddlers, and that we should restore an occupational title (σαγματᾶς, σαγματοποιός, σαγματογράφος, all occur in Preisigke, *WB*). The one price for a saddle listed in Drexhage, *op.cit.*, 401, however, is for 2 dr. (*SB X* 10241 of 45 C.E.). As saddles probably varied considerably in character and quality, 4 dr. certainly seems like a reasonable saddle price here. The smaller figure, however, is difficult to interpret satisfactorily as a price for an object.

30 For the term ἀγγείδιον, see P. Radici Colace, *Lexicon Vasorum Graecorum I* (Pisa 1992) 57.

34 The result of the addition is 0.5 ob. too high.

39 For prices of χύτραι in the papyri, cf. H.J. Drexhage, *op.cit.*, 383. An obol for such an item is quite common during the first two centuries of Roman rule in Egypt.

40 According to *P.Oxy.* IV 736.73 ἀλμυρῖς = "pickle;" it is translated as "Zalztunke" in Preisigke, *WB* s.v. and as "Brassica cretica" in *LSJ* s.v. Cf. above, p. 17.

49 U. Horak discusses the use of arsenic as a pigment in *Tyche* 13 (1998) 122-3.

56 Obviously, the reading and interpretation of the *ed.pr.* cannot stand, but we do not know what the word ζυμαίου (gen.) stands for: possibly, T. Renner suggests, an otherwise unattested adjective ζυμαῖος from ζύμη, leaven or yeast.

57 The reading and interpretation of the *ed.pr.* cannot stand, but we cannot arrive at a convincing reading. We have considered readings like ελκα / ελβα / αλκυ / αλμυ (leading towards ἀλμυ(ρίδος ?); cf. note to l. 40, where also a half-obol is paid), but we cannot convince ourselves that any of these is satisfactory.

60 Following ἄρτων there seems to be a qualifying adjective, but we have not succeeded in identifying it with the help of E. Battaglia, *op.cit.*

61 See note to l. 17.

68 The subject of glass (ὑάλος) in the papyri known up to his time is discussed by Th. Reil, *Beiträge zur Kenntnis des Gewerbes im hellenistischen Ägypten* (Leipzig 1913) 47 ff. There is, of course, sufficient new material to warrant a new study, but this is not the place to undertake it. On glass in the Roman period, see now E.M. Stern's study in *AJA* 103 (1999) 441-84.

70 The result of the addition should be 15 dr. 3.5 ob., i.e. 1 dr. less.

73 The ρ has been corrected (into γ ?); we cannot tell exactly what the writer had in mind in correcting the letter, which has a small diagonal stroke. We know of no discussion of the growing of asparagus in Egypt, but there are some ten references to be found in the DDBDP.

89 We see nothing in the ink traces that correspond to the expected total amount of 3 dr. 2 ob.

90 It is difficult to tell what the function of the omicron after  $\epsilon\lambda\alpha\iota\acute{\omicron}\upsilon$  was to be: did the scribe intend to start a word like  $\omicron\mu\omicron\iota\omicron\varsigma$  (but this is not used anywhere else in the text)? Vice versa, if we could read  $\epsilon\lambda\alpha\iota\acute{\omicron}\upsilon \omicron\beta$ , one could see here the beginning of the word  $\omicron\beta\omicron\lambda\omicron\varsigma$  written out in full (rather than as a symbol) followed by a numeral.

100 The reading of the *ed.pr.*,  $\omicron\rho\acute{\upsilon}\zeta\alpha\varsigma$  is unlikely because there was no rice culture in Roman Egypt; cf. Schnebel, *op.cit.*, 100 (*ibid.* he discusses also the date of this papyrus in a long note) and now R.T.J. Cappers, "A Botanical Contribution to the Analysis of Subsistence and Trade at Berenike (Red Sea Coast, Egypt)," in O.E. Kaper (ed.), *Life on the Fringe. Living in the Southern Egyptian Deserts during the Roman and Early-Byzantine Periods*. CNWS Publications 71 (Leiden 1998) 75-86, esp. at 86. Imports of rice into the heartland of Egypt do not seem likely.

108 We do not know whether we should regard  $\varsigma\tau\epsilon\varphi\alpha\nu$ ( ) as a common noun or as a personal name (i.e. read  $\varsigma\tau\epsilon\varphi\acute{\alpha}\nu(\omega)$  = "to Stephanus").

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