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DATINGS IN THIRD CENTURY MICHIGAN OSTRACA

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In this article we wish to explore the possibilities of assigning new or more precise dates to a number of Michigan ostraca dated in the *ed. princ.* simply to the third century A.D., in many cases without further specification of possible reigns involved. We have scrutinized all of these ostraca published in the *O. Mich.* volumes and we think that in a considerable number of cases significant progress can be made. Moreover, new readings in some texts are the result of our 'textbook calculations'.¹ We shall deal with these texts in the numerical order of publication in the respective volumes of *O. Mich.* Texts which seem to allow more than three possible solutions for an attempt to assign a specific date are excluded from our discussion. For our studies we have made extensive use of the findings reached by D. Rathbone, *The Date of the Recognition in Egypt of the Emperors from Caracalla to Diocletianus*, ZPE 62 (1986) 101-31 (cited below as 'Rathbone' and page number).² We also rely on the conclusion reached by R.S. Bagnall and K.A. Worp that single regnal years were not used under the tetrarchs.³ Of course, we have adopted the principle that one should place dates calculated on the basis of prosopographical connections as closely as possible into the neighbourhood of already known dates for a person.

O. Mich. I 26: this ostrakon (cf. *BL* VII 287; date: 17.VI.283) has been discussed already by Rathbone 128 who cautiously remarks: "... A unique curiosity is *O. Mich. I 26*,1, from the Arsinoite, whose date was restored as '[year x of Carus and] Çaeirrus (= Carinus), Pauni 23.' This is very suspicious. There is no other evidence that Carinus ruled jointly with his father Carus, and the restoration seems much too long. A preferable alternative would be '[year 2] of Carinus, Pauni 23' = 17th June 284. But it would be unsafe to take this uncertain reading from a highly abbreviated receipt as evidence that Numerianus' promotion had not yet been recognised in the Arsinoite; his name may have been omitted by accident or for the sake of brevity." In addition, we should notice the rather remarkable spelling of the emperor's name. Upon our request T. Gagos checked the photograph and he reports (by letter from 9. X.1989): "The reading Καίρνον is not safe. In the album, where the photograph of this ostrakon is now affixed, there is a notation by Prof. Youtie saying 'I am willing to read] α-τρειον.' L. Koenen agrees with me that this reading is palaeographically much better but the ρ could be an ι and the following ε a υ. I should perhaps add that over the υ there is something which looks like the ι's over Παῶνι and [Ὀνν]ῶφρι (cf. the editor's note), but it is oblique and slopes slightly to the right. I cannot confirm whether this is ink."

¹ We are most grateful to Dr. T. Gagos and Prof. L. Koenen for their untiring efforts to answer to our many questions and to verify or suggest new readings on photographs which were taken when the Michigan Collection returned the originals to Egypt; moreover, they sent us prints of some of these photographs which illustrated their solution of problems raised by us.

² For the chronology of the 3rd century see also M. Peachin, *Roman Imperial Titulature and Chronology*, A.D. 235-284, *Studia Amstelodamensia ad Epigraphicam, Ius Antiquum et Papyrologicam Pertinentia* 29, Amsterdam 1990, esp. Chap. 2

³ *Chronological Notes on Byzantine Documents*, II # 12, *BASP* 16 (1979) 221-25. Cf. also R.S. Bagnall and K.A. Worp, *Regnal Formulas in Byzantine Egypt*, Missoula 1979 (hence: *RFBE*), esp. chapt. I, §§ A-E.

We are, therefore, happily rid of the emperor Carinus. Consequently, this ostrakon cannot be dated with a reasonable degree of precision.⁴ For the question, how the new reading] . ατρεου (or] . ατινου) could fit into the pattern of the ostrakon, it is not easy to find a fully convincing solution. Maybe we should think of an official's name, a patronymic or a geographical name (in the genitive), but we do not wish to exclude other possibilities.

O. Mich. I 158: the editor of this late third century ostrakon reads the dating phrase as "year 4, Thot 30" (i.e. 27/28.IX). He dates the ostrakon to 27.IX.278 (4 Probus, A.D. 278/9) or 28.IX.287 (4 Diocletian, A.D. 287/8). The latter date, however, seems most unlikely in view of the fact that we would expect regnal year 4 Diocletian to have been accompanied by regnal year 3 Maximian (cf. *BASP* 16 [1979] 221-225). On the other hand, we cannot find good reason to exclude year 4 Aurelian, A.D. 272/3. Therefore, we prefer to date this ostrakon to either 27.IX.272 or 27.IX.278.

O. Mich. I 159: cf. below, n. 15.

O. Mich. I 177: this ostrakon, dated to 'year 2 (?)', Hathyr 21 (17/18.XI)', is addressed to a certain Arabikos, son of Ptollas.⁵ This person is mentioned in a number of other precisely dated ostraca and in several papyri of the archive of Isidorus:

<i>O. Mich.</i> II 802:	19.XI.296	<i>P. Cair. Isid.</i> 6:	300-305
<i>O. Mich.</i> II 909:	4.VI.298	<i>P. Cair. Isid.</i> 9:	after 30.XI.309
<i>O. Mich.</i> II 918:	300/301	<i>P. Cair. Isid.</i> 10:	311
<i>O. Mich.</i> I 501:	21.VI-2.VII.302	<i>P. Cair. Isid.</i> 17:	314
<i>O. Mich.</i> III 1077:	12.IX.302		

Within the range of these attestations (A.D. 296-314), a single regnal year 2 can only be attributed to Domitius Domitianus, i.e. A.D. 297/8; this would imply dating the ostrakon to 17.XI.297. Before this period, years 2 Diocletian (date: 17.XI.285), 2 Carinus and Numerianus (date: 18.XI.283), or even 2 Probus (date: 17.XI.276) are, at least theoretically, possible. There is, however, a much smaller (and declining) degree of probability in such datings and a date under Domitius Domitianus must remain our best choice.

O. Mich. I 332: for a new reading in line 7 see below on *O. Mich.* I 374.

O. Mich. I 360: for new readings in this text see below, n. 7; for the dossier to which this text belongs see below on *O. Mich.* I 370;

O. Mich. I 361: see below on *O. Mich.* I 447.

O. Mich. I 368: see below on *O. Mich.* II 777 and n. 14.

O. Mich. I 370: this ostrakon from Pharmouthi 1 of a 2nd regnal year mentions a certain Naas, son of Dioskoros, who is known from a number of other texts; his dossier consists of the following ostraca:

⁴ For a possible prosopographical connection of Onnophris son of Maron with *O. Mich.* I 159 from 287/88 (?) see below, n. 15.

⁵ For the family cf. below on *O. Mich.* I 374.

- O. Mich.* I 406: year 1, Pachon/Pauni 6 (?; 1 or 31.V),⁶ for the crop of years 1 and 2
O. Mich. I 360:⁷ year 1, Phaophi 1 (28/29.IX), for the crop of year(s) []
O. Mich. I 405: year 1, Pachon 5 (30.IV),⁸ for the crop of years 1 and 2
O. Mich. I 370: year 2, Pharmouthi 1 (27.III)
O. Mich. I 411: 1.X.287(?); refers to the crop of year 3-2; cf. *RFBE* 6
O. Mich. I 413: crop of year 3-2 (286/7; cf. *RFBE*, *ibidem*)
O. Mich. I 417: XII.288-I.289 (cf. *RFBE* 7)
O. Mich. I 421: 15.III.290 (cf. *RFBE* 7)
O. Mich. I 438: 29.III.293 (cf. *RFBE* 9)

Within this archive, the 2nd regnal year of *O. Mich.* 370 may be attributed to the reign of Carinus and Numerianus and the date of the ostrakon (Pharmouthi 1) may therefore be calculated as 27.III.284. Nevertheless we may also reckon with 2 Diocletian, i.e. 27.III.286. This, however, seems less likely, because probably before this date, on 1.III.286, Diocletian had already chosen Maximian as co-emperor (see below on *O. Mich.* I 447). We would have to suppose that the Fayumic scribe of the Michigan ostrakon had not yet heard of this new devel-

opment, while four days later the fact was known in the Hermopolite nome (see *BGU* IV 1090). The 2nd year of Probus (date: 27.III.276) or Claudius Gothicus (date: 27.III.269) could also be considered, but with an even lesser degree of probability.

⁶ The *ed. princ.* reads Thoth 9 (6/7.IX), but this seems a rather unlikely month in combination with a regnal year 1, as it would be hard to find a Roman emperor whose first regnal year began almost simultaneously with the start of the common Egyptian civil year (see also n. 7). J. Lallemant (*L'administration civile*, 34 n. 2) had already concluded that the text could not date from A.D. 284 (so *ed. princ.*), as Diocletian was not yet emperor on 6.IX.284. T. Gagos reports by letter of 17.V.1989 that the reading in line 4 is correct as far as the α of the year and the first θ of the the name of the month are concerned, but that the rest of the line is rather obscure. On a photograph kindly provided to us by our Michigan colleagues, the reading of θ appears less satisfactory; π may be possible. This has now been accepted by L. Koenen and T. Gagos, and the former tentatively tries Πᾱχ(ὠν) ζ (date: 1.V(?)) or Πᾱ[ϑ(ν)] ζ (date: 31.V(?)); the reading of the numeral for the day was not dotted by the editor; it cannot be confirmed on the photograph. In general, it may be noted that the surface of the ostrakon has flaked off considerably and it is no longer possible to verify many of the editor's readings. Instead of γενή(ματος) α (ἔτους) θη(καυροῦ) in line 1, T. Gagos restores γενή(ματος) α (ἔτους) <τοῦ καὶ> β (ἔτους) or perhaps γενή(ματος) α (ἔτους) <καὶ> β (ἔτους); cf. *O. Mich.* I 405 and n. 8 below. Finally, we are pleased to record P.J. Sijpesteijn's suggestion to read the quite regular place name Σεβεννύτου (gen.).

⁷ This ostrakon may not belong to Naas' dossier: his name is completely, his patronymic partly restored. Moreover, the date in line 6, (ἔτους) α Φαῶφι α (28/29.IX; the α of the year, dotted by the editor, is secure according to L. Koenen and T. Gagos), poses a problem. In the third century a date so early in an emperor's 1st year matches best with the reigns of Valerianus (date: 27.IX.253) or Macrienus and Quietus (27.IX.260; but see also n. 6); this, however, entails a rather long range of attestations for Naas. Other options strain the evidence: one might attribute the date to Claudius Gothicus (date: 27.IX.268?; but this happens to be the date of the latest known document dated to Claudius Gothicus' predecessor Gallienus [*P. Tebt.* II 581]), to Quintillus or Aurelianus (date: 27.IX.270[?]; but both are attested as single rulers in their first regnal year only by coins, not [yet] in documents), or to Carus (date: 27.IX.282[?]; but there are *P. Mich.* XI 610 [Oxyrhynchus], dated to Phaophi of 8 Probus [Carus' predecessor], and *P. Oxy.* L 3569 [Small Oasis], dated to Hathyr of 8 Probus). For the complex situation with these reigns cf. Rathbone 120ff.

⁸ According to T. Gagos, the editor's reading in line 1 should be changed from γε(νήματος) α (ἔτους) καὶ η (ἔτους) to γε(νήματος) α (ἔτους) καὶ β (ἔτους) (cf. already the *ed. princ.*, note *ad lc.*). W. Seston, *Dioclétien et la Tétrarchie*. 64 n. 1, reads the latter set of numerals in an inverted order, but we fail to see, how he comes to his reading. *BL* III 264 is not adequately representing Seston's view. In addition, T. Gagos tells us that in line 2 Μαγάιδος should be read for Πτολεμαΐδος and that the numeral is 5 rather than 6. For the date of the ostrakon see below.

O. Mich. I 374: This receipt, dated to 'Year 3, Choiak 1' (27/28.XI), acknowledges that Ptollas son of Sokrates transports crop of the harvest of year 1. This Ptollas may be identified with the father of Arabikos (cf. above, on *O. Mich. I 177*; for other family connections cf. *P. Cair. Isid.* 57, I 7 [315], Ptollas, son of Arabikos, and *O. Mich. III 1001* [19.VII.292], Chairemon son of Ptollas, grandson of Arabikos). This Ptollas is mentioned in the following seven Michigan ostraca dated securely:

<i>O. Mich. III 1061</i> :	31.I.289	<i>O. Mich. II 802</i> :
	19.XI.297 (cf. <i>RFBE</i> 28)	
<i>O. Mich. II 891</i> :	28.III.290	<i>O. Mich. III 1067</i> :
<i>O. Mich. II 892</i> :	23.I.291	27.V.298
<i>O. Mich. II 893</i> :	26(?).VI.292	<i>O. Mich. II 909</i> :
		4.VI.298

Furthermore, he occurs in the following undated texts: *O. Mich. I 332* (read in line 7 the patronymic as Σωκρά(του) rather than as Σωκρᾶ ?; cf. *O. Mich. I 374.5*), II 869, 888 (cf. below) and III 1070 (?; cf. editor's note). From the range of his attestations one may deduce that, in *O. Mich. I 374*, years 3 Carinus and Numerianus (date: 27.XI. 284) as well as 3 Probus (date: 27.XI.277) are possible. We may note that in the former case, this ostrakon would be the latest Fayumic document referring to this reign (but cf. below, *O. Mich. I 376*).

O. Mich. I 376 and 378: these two ostraca mention a certain Ptolemaios son of Ioulianos, who is known from the following Michigan ostraca:

<i>O. Mich. II 928</i> :	year 1, Phamenoth 25, for the crop of year 6 (i.e. 21.III.276; for this text and its date cf. below)
<i>O. Mich. I 128</i> :	1.VI.279 (by 4 Probus)
<i>O. Mich. I 402</i> :	year 1, Pharmouthi 18, for the crop of year 7 (ed.: 13.IV.283?)
<i>O. Mich. I 376</i> :	year 3, Tybi 10 (5/6.I)
<i>O. Mich. II 875</i> :	year 3, Pharmouthi 13 (8.IV)
<i>O. Mich. I 378</i> :	year 3, Pharmouthi 28 (?; 23.IV)
<i>O. Mich. II 870</i> :	year 4, Hathyr 26 (22/23.XI)
<i>O. Mich. II 883</i> :	year 6, Choiak 25 (21/22.XII)
<i>O. Mich. II 912</i> :	IX-X.298

Furthermore, there is the undated *O. Mich. I 333* (late III) and 603 (ed.: late III or early IV; in view of the occurrence of Manes son of Maron, the latter date seems less likely, see below on *O. Mich. II 872*)

Within the period of A.D. 276-298 single regnal years 4 and 6 belong only to the reign of Probus, i.e. A.D. 278/9 and 280/1. *O. Mich. II 870* must date, then, from 22.XI.278 and *O. Mich. II 883* from 21.XII.280. Further, Pharmouthi in a single regnal year 3 (*O. Mich. II 875* and *I 378*) indicates the third year of Probus, hence 8.IV and 23.IV.278 respectively. *O. Mich. I 402* is most likely datable 13.IV.283 (the crop of 7 Probus was harvested in the summer of 282, while "year 1" would refer to 1 Carus [282/3]). Finally, a date of Tybi 10 in a regnal year 3 (*O. Mich. I 376*) points to either 3 Probus (date: 5.I.278) or (less probably) to 3 Carinus and Numerianus (date: 5.I.285). If the latter date were correct, this would constitute a very late date on which these emperors were still recognised in Egypt (the earliest attestation of their successor, Diocletian, dates from 10.II.285 (*P. Michael.* 21.13); see also above, on *O. Mich. I 374*, and below, on *O. Mich. I 408*).

O. Mich. I 381, 386, and 388: see below on *O. Mich. I 447*.

O. Mich. I 390: this late third century text bears a date of Mecheir 21 (15/16.II) in a regnal year 5. Because a single regnal year 5 should not be connected with the reign of Diocletian, only two options are open, that is 5 Aurelian, A.D. 273/4 (date: 15.II.274), or 5 Probus, A.D. 279/80 (date: 16.II.280).

O. Mich. I 398: this third century ostrakon is dated to a single regnal year 1, Choiak 13 (9/10.XII), while it refers to the crop of a 3rd regnal year. The editor proposes to connect the latter year with A.D. 269/270 and suggests a date to 9. XII.270. This, however, is impossible: A.D. 269/270 was 2 rather than 3 Claudius Gothicus, and it is all but certain that on 9.XII.270 in the Fayum documents were dated after 1 Aurelian (cf. Rathbone, 123). We prefer to think that the crop of year 3 was harvested during the summer of A.D. 253, i.e. in 3 Gallus and Volusianus, while the single regnal year 1 can be related to the reign of Valerianus and Gallienus whose year 1 is A.D. 253/4; hence the text may be dated to 9.XII.253. This presupposes that the interval between (a) the harvest and (b) the transportation from the granary to the harbor was in accordance with the normal interval between (a) and (b) in the order of ca. 1 year (sometimes much shorter). Occasionally we encounter intervals of ca. 2 years or even ca. 3 years.⁹ As we cannot further identify the persons mentioned in *O. Mich. I 398* with certainty, we have no prosopographical arguments to corroborate our date, but in cases like these we prefer a date based on statistical probabilities.

O. Mich. I 404: this ostrakon bears a date of a single regnal year 1, Pachon 5 (30.IV) and refers to the crop of a 6th regnal year. The editor connects the latter year with some reservation to 6 Probus, A.D. 280/1, and tentatively dates the ostrakon to 30.IV.283(?). If this is correct, one has to assume that the interval between harvesting the crop and the transportation to the harbour was ca. 2 years. This is possible (see above on *O. Mich. I 398* and n. 9), but an alternative set of years would put the interval into a more normal pattern. The crop of year 6 could be that of 6 Aurelian, A.D. 274/5 (harvest in summer 275), while the date of Pachon 5 (30.IV) in a single regnal year 1 may be assigned to 1 Tacitus, A.D. 275/6 (for a similar configuration see below on *O. Mich. II 888* and 928); consequently, one may date the text to 30.IV.276.

O. Mich. I 405: for the dossier to which this text belongs and the attested range of Naas' activities see above, *O. Mich. I 370* and, for new readings, above, n. 8. The date of the ostrakon can be calculated as 30.IV.285 (1 Diocletian). The crop of years 1 and 2 refers to Carus (282/3 and 283/4 respectively). For if we would attribute this 'year 1' to Carus (with the crop of years 1 and 2 referring to Probus [275/6 and 276/77 respectively], considerable time would have elapsed between the harvest and the transportation of the crops (cf. above on *O. Mich. I 398*). The same would apply if we were to date the ostrakon to an even earlier reign.

⁹ ca. 2 years: *O. Mich. I 414* with *RFBE* 7 and *BASP* 16 (1979) 222/3; *O. Mich. II 895* and 912; III 1011; maybe also *O. Mich. I 404*, cf. below; ca. 3 years: *O. Mich. I 433* and 490.

O. Mich. I 406: For the dossier to which this text belongs see above on *O. Mich. I* 370 and 405; for new readings, above, n. 6. This ostrakon again is a transportation receipt for Naas issued in year 1 Diocletian (perhaps Pachon 6 [1.V.85], if not Pauni 6 [31.V.85]) for the crops of year 1 and 2 (either 282/83 and 283/4 or only 283/84).

O. Mich. I 408: This ostrakon contains a thesauros receipt given to Ammonios son of Papeeis (cf. below, on *O. Mich. I* 447) for the crop of the first year of Diocletian. The *ed. princ.* reads line 2 as Διοκλητιανοῦ με(γίctου) θεοφιλετάτου (?), but these resolutions are virtually unacceptable. The epithet 'maximus' should not occur without a honorific epithet like 'Germanicus' *vel sim.*, and the Christian epithet θεοφιλέτατος is never found with Diocletian. T. Gagos reports that the actual reading is correctly represented in the note *ad loc.* The abbreviation mark, however, after με (cf. the editor's note) is shaped differently from those used elsewhere in this ostrakon (in line 1, the scribe abbreviates both words with a horizontal dash over the letters), and in particular the abbreviation mark after θ looks like the symbol for 'regnal year.' Moreover, the θ is smudged, and, according to T. Gagos, the scribe initially wrote θ and subsequently corrected it to η. To make matters worse, the published text of the ostrakon lacks an exact date by month and day. Hence T. Gagos aptly suggests to read Με(χειρ) [θ] η or Με(κορη) [θ] η. This would produce either the date of 2/3.II or 1.VIII for this receipt "on account of the crop of (Diocletian's) first year." The former date (2.II.285) would be very early in Diocletian's first year (the earliest secure date in papyri is 10.II.285 [*P. Michael.* 21]; see *RFBE* 2, form. 3). Although this is no objection, there is also no obstacle against dating the ostrakon to the other date mentioned (1.VIII.285) as we do not accept the objections raised by L. Lallemant (*L'administration civile de L'Égypte* (Bruxelles 1964) 34 n. 2; cf. *RFBE* 2 form. 6).

O. Mich. I 447: for a previous attempt to date the ostraca attesting Ammonios son of Papeeis see *BASP* 16 (1979) 225. He occurs in the following dated ostraca:

<i>O. Mich. I</i> 408: 1.VIII.285 (cf. above)	<i>O. Mich. I</i> 432: 28.VI.292
<i>O. Mich. I</i> 409: 27.XI.286	<i>O. Mich. I</i> 434: 7.XII.292
<i>O. Mich. I</i> 134: 12.VII.290	<i>O. Mich. I</i> 437: 29.III.293
<i>O. Mich. I</i> 429: for the crop of 289/290 (date: 290/291?)	<i>O. Mich. I</i> 453: 23.IV.295

Furthermore, there are a number of undated ostraca:

<i>O. Mich. I</i> 361: year 1, Phamenoth 26 (22.III)	<i>O. Mich. I</i> 386: year 4, Epeiph 14 (8.VII)
<i>O. Mich. I</i> 447: year 2 or 10, Pharmouthi 11 (6.IV)	<i>O. Mich. I</i> 388: year 5, Hathyr 10 (6/7.XI)
<i>O. Mich. I</i> 381: crop of year 2	<i>O. Mich. II</i> 806: year 5, Mecheir 29 (23/24. II)

Finally he occurs in the following Isidorus papyri:

<i>P. Cair. Isid.</i> 6: 300-305	<i>P. Cair. Isid.</i> 12: 313/4
<i>P. Cair. Isid.</i> 9: post 30.XI.309	<i>P. Cair. Isid.</i> 17: 314

The attestations of Ammonios range from 284-314 and cover a rather long period of time. As has already been suggested (*BASP, loc. cit.*), we attribute years 4 and 5 to the reign of

Probus and, hence, date *O. Mich.* I 386 to 8.VII.279, *O. Mich.* I 388 to 7.XI.279, and *O. Mich.* II 806 to 24.II.280.

As for *O. Mich.* I 361 and 447, the situation is more complicated; their regnal year can be related to several reigns. The editor of *O. Mich.* I 447 read the numeral of the regnal year in line 4 as '10' but considered year 2 also possible. The latter reading was confirmed by L. Koenen ("a rather longish β not ι"), who nevertheless retains a dot under the letter, because it is hard to tell if what looks like the lower and upper curves of the *beta* are real traces or photographic interference. Pharmouthi 11 in a regnal year 2 brings us to 6.IV.277, if it is connected with Probus, but year 2 can also be understood as the second year of Carinus and Numerianus and thus date the ostrakon to 6.IV.284. On the other hand, a date of 6.IV.286 should be excluded since by that time a combined reference should be expected: 2 Diocletian, 1 Maximian). For the earliest attestation in Egypt of their joint rule after Maximian's accession to the throne (on 1(?).III.286) cf. *BGU* IV 1090 [Hermop., 31.III.286] and ZPE 61 (1985) 99 n. 2.¹⁰

O. Mich. I 361, however, with its date of Phamenoth 26 (22.III) in a regnal year 1 cannot belong to the reign of Probus, which commenced V/VI.276. There is no obstacle against 1 Carus (date: 22.III.283) or 1 Diocletian (date: 22.III.285), and, if year 2 could refer to A.D. 276/7, one may even reckon with a date in 1 Tacitus (XI-XII.275/ V-VI.276), date: 22.III.276.

Finally, the crop of year 2 in *O. Mich.* I 381 may be that of 283/4, 285/6 or 297/8.

***O. Mich.* I 468:** see on *O. Mich.* II 887.

***O. Mich.* II 752:** this third century ostrakon is dated to Mecheir 30 (24/25.II) in a regnal year 15 and refers to a payment of a tax through the village elders of year 14. Years 14 and 15 in a third century text must be the regnal years of Septimius Severus or Gallienus, i.e. 205/6 and 206/7 or 266/7 and 267/8. Unfortunately, we have found no further criteria to establish, which reign is meant.

***O. Mich.* II 777** comes from Karanis and contains a receipt dated (lines 6-7) to Tybi 14 (or 24; cf. note *ad loc.*) in an unspecified year 2 for transportation by a certain Pleein son of Mysthes of three *sakkoi* on account of the crops of the '2nd and 1st year', β (ἔτους) καὶ α (ἔτους) (line 1).¹¹ The *ed. princ.* dates this text to 19.I.286 (which matches Tybi 24 suggested in the note *ad loc.*, whereas the text reads ιδ), and this date is taken over without further questioning in *RFBE* 3, form. (7) and 6, form. (9). The editors add the remark (cf. note

¹⁰ We had originally suspected that the month name should be read as Φαῶ(φι) rather than as Φαρ(μοῦ-θι); in that case year 2 might be that of Domitius Domitianus and the date could be 8.X.297. In favour of this speaks the fact that the text mentions a dekaprotos Heron who may be identified with his namesake occurring in *P. Cair. Isid.* 39,3, also from year 2 of Domitius Domitianus. T. Gagos, however, reported that this reading is impossible.

¹¹ In line 3, we read μετέ(βαλεν), since this verb is the appropriate verb in transportation receipts. The reading has been confirmed by T. Gagos and L. Koenen. The *ed. princ.* read μεμέ(τρηκεν). If this were right, then this ostrakon were a receipt for payment at the granary; hence, H.C. Youtie, *Scriptunculae* I 214, did not include this ostrakon in his list of transportation receipts found at Karanis. However, the measurement by sacks (not artabs) indicates a transportation receipt, and most of the other documents mentioning Pleein son of Mysthes are concerned with transportation, too (cf. *O. Mich.* I 368, II 878 and 879).

to lines 6-7), that the date suggests τρίμηνος πυρός (sown in October, harvested three months later).

There are, however, problems with this date:

(a) The date of transportation fairly early in the regnal year does not suggest τρίμηνος πυρός. R.S. Bagnall has shown that before 325 the number of transportation receipts peaked during the early months of any given Julian year (*P. Col.* VII, p. 95f. and p. 97). Hence transportation in January of the crop harvested during the early summer of the year before was quite normal.

(b) "Year 2 and year 1 " should refer to the regnal years of two co-reigning emperors. On 9(19).I.286 only Diocletian was Augustus. Maximian became Augustus on 1.III. 286 (see above, on *O. Mich.* I 447). Before this date, the crop should not have been designated by both Diocletian's and Maximian's regnal years.

(c) If the regnal years given for the crop should refer to the harvest of 2 Diocletian and 1 Maximian (A.D. 285/6; harvest in early summer of 286) and the date of the ostrakon should indeed be 9 or 19.I.286, we would deal with the curious situation, that the receipt was written ca. 4 or 5 months before the crop of summer 286 was actually harvested. This is impossible, and a scribal or editorial mistake should be supposed. *Either* the designation of the year of the crop in line 1, β (ἔτους) καὶ α (ἔτους), is correct, the crop is that of summer 286, and we must adjust the reading of the dating formula (in line 6 read <γ (ἔτους) καὶ> β (ἔτους)¹² and date the text to 9[19].I.287?); *or* the date of the regnal year has been read correctly and the regnal years given for the crop should be related to another reign than that of Diocletian and Maximian.

Now it happens, that the deliverer in this ostrakon, Pleein son of Mysthes, occurs also in a few other Michigan ostraca:

- O. Mich.* I 156: dated with the help of a fully developed regnal formula (3 Gallus and Volusianus) to 3.XI.252;
- O. Mich.* I 368: transportation dated to year 2 (no titulature), Phamenoth 8;
- O. Mich.* II 878: transportation dated to year 3 (no titulature), Pauni;
- O. Mich.* II 879: transportation dated to year 4 (no titulature), Mecheir;
- O. Mich.* II 770: unspecified payment for a year 3 (no titulature).

It is obvious that there is a large gap of ca. 35 years between the date of *O. Mich.* I 156 (A.D. 252) and that of *O. Mich.* II 777, if the date of the latter ostrakon is A.D. 286 (or A.D. 287). Moreover, the dating to a single year '2' found in *O. Mich.* II 777 reminds us of the dates in the other texts listed above, in which years 2, 3 and 4 are found. In order to close that gap we have looked for an alternative date for *O. Mich.* II 777 and for a suitable date for the related Michigan ostraca I 368, II 770, 878 and 879. It should be kept in mind that years 2, 3 and 4 can be found in quite a few of the reigns in the third century A.D., but *O. Mich.* II 777 provides us with an extra helpful element, i.e. the designation of the crop as being that of β (ἔτους) καὶ α (ἔτους). In fact, we think that only the summer of A.D. 251 is a conceiv-

¹² A single regnal year is not expected in any dating formula under Diocletian, if a crop is already designated by a double year; cf. *BASP* 16 (1979) 221ff.

able candidate for the crop referred to; the harvest of this summer fell at the end of 2 Decius, Herennius, and Hostilianus but at the same time this harvest was that of 1 Trebonianus Gallus and Hostilianus. Year 2 in the dating clause would refer, then, to 2 Trebonianus Gallus and Volusianus, and hence we date the ostrakon to 10(20).I.252. This falls comfortably close to the only secure date we have for Plein son of Mysthes (3.XI.252). There remains a minor problem: the scribe would have elliptically phrased γενή(ματος) β (ἔτους) καὶ α (ἔτους) instead of γενή(ματος) β (ἔτους) τοῦ καὶ α (ἔτους), "for the year 2 which equals year 1."¹³

It remains to propose Julian equivalents for the dates found in the other texts listed above:

Phamenoth 8, year 2 in <i>O. Mich.</i> I 368:	4.III.252(?) ¹⁴
Pauni in year 3 in <i>O. Mich.</i> II 878:	V-VI.253(?)
Mecheir in year 4 in <i>O. Mich.</i> II 879:	I-II.254(?)

***O. Mich.* II 806:** see on *O. Mich.* I 447.

***O. Mich.* II 870:** see on *O. Mich.* I 376, 378.

***O. Mich.* II 872:** this receipt issued by the *κυτολόγοι* of Karanis concerns the transportation of 5 sacks of some commodity (probably wheat or barley) by a certain Manes son of Maron on Mesore 3 (27.VII) of a regnal year 1. We think that the occurrence of the *κυτολόγοι* precludes a date much later than A.D. 246, as by that year these officials were succeeded to by dekaprotoi (cf. J.D. Thomas, *ZPE* 19 [1975] 111-19). On the other hand, there is a text attesting Manes son of Maron in what seems to have been 14 Gallienus (*O. Mich.* I 458 from 30.I.267, cf. *BASP* 16 [1979] 224).¹⁵ Under the circumstances we feel inclined to link year 1

¹³ For *O. Mich.* I 405 and 406 we assume that two regnal years identify the crops harvested in different years. It is possible to apply the same approach here although *O. Mich.* II 777 mentions the years in descending order. With the general dating of this ostrakon to the period around 250 (*O. Mich.* I 156 from A.D. 252) and a dating to Tybi 14/24 in a year 2 for the crop of years 2 and 1, the regnal years of Decius are most likely: 1 Decius = A.D. 249/50, 2 Decius = A.D. 250/1. Year 2 in the dating clause would then refer to 2 Trebonianus Gallus and Volusianus = A.D. 251/2. This approach would not produce a date for the ostrakon that is different from the one calculated above in the main text.

¹⁴ This ostrakon was written by the same hand which wrote *O. Mich.* II 876, III 1057 (inv. 9843) and 1058 (inv. 9841) (cf. *O. Mich.* II 876, note, and H.C. Youtie, *Scriptiunculae* II 919-920). *O. Mich.* II 876 and III 1058 concern a wine merchant Seuthes who was probably the son of Ptolemaios. For this man we have the following dates:

<i>O. Mich.</i> III 1057:	year 2, Mecheir 28 (22/23.II)	<i>O. Mich.</i> II 877:	year 3, Pharmouthi 18 (13.IV)
<i>O. Mich.</i> III 1058:	2, Pharmouthi 10 (27c.VI)	II 876:	11/10/3, Mecheir 30 (24.II.295)
<i>O. Mich.</i> II 876:	year 3, Pharmouthi 16 (11.IV)		

As year 3 must refer to a reign previous to that of Diocletian and of Maximian (otherwise the date should have been indicated as 'year 3 and 2'), we may relate this year, and probably also year 2, to the emperor Probus. Year 2 could refer to A.D. 276/277, year 3 to 277/278. If necessary, one may also connect year 2 with 2 Claudius Gothicus (A.D. 269/270), while year 3 could refer to 3 Aurelian (A.D. 271/272). Even so, there is no reason to believe that, given the identity of hands in *O. Mich.* I 368 and III 1057 and 1058, the year mentioned in *O. Mich.* I 368 must be the same as that in the other two instances of this year. The handwriting of a person may retain its characteristics over a longer period of time and it is well conceivable that *O. Mich.* I 368 was written in 252, while *O. Mich.* III 1057 and 1058 date from ca. 20 to 25 years later.

¹⁵ There is, however, reason to take a critical look at the argument offered there. The securely dated *O. Mich.* I 159 (287/8) referred to in the *BASP* article and attesting Manes son of Maron, is in fact not a reliable point of departure for establishing Manes' dates, as Manes' name has been restored. In itself this restoration may seem plausible enough, as most of the texts mentioning a patronymic Maron can indeed be related to

in *O. Mich.* 872 to the reign of Philippus Arabs, A.D. 243/4 (date of the text, then, 27.VII.244), but we cannot safely exclude an earlier date of, e.g., 27.VII.238 (i.e. 1 Pupienus and Balbinus or 27.VII.235 (i.e. 1 Maximinus).

***O. Mich.* II 873:** see on *O. Mich.* II 887.

***O. Mich.* II 875:** see on *O. Mich.* I 376, 378.

***O. Mich.* II 876 and 877:** see above n. 14.

***O. Mich.* II 878 and 879:** see above on *O. Mich.* II 777.

***O. Mich.* II 880 and 881:** both ostraca mention sitologoi handing over a receipt for transportation of the crop of a year 4 in year 5 on Phaophi 30 (27/28.X) and Tybi 20 (15/16.I) respectively. As we already stated on *O. Mich.* II 872, sitologoi do not occur in the third century later than ca. A.D. 246. Therefore years 4 and 5 of the Philippi are no longer acceptable for these ostraca unless we allow, for a certain period of overlapping use of the terms of sitologos and dekaprotos. The only possible third century regnal years 4 and 5 are those of Elagabal (220/1, 221/2), Severus Alexander (224/5, 225/6) or of Gordian III (240/1, 241/2); the dates of the ostraca, therefore, may be calculated as 27.X.221/225/241 (*O. Mich.* II 880) and 15.I.222/226/242 (*O. Mich.* II 881).

***O. Mich.* II 883:** see on *O. Mich.* I 376, 378.

***O. Mich.* II 887:** if the editor is right in stating that the handwriting of this ostrakon, dated to year 7, Epeiph 25 (19.VII) and mentioning the crop of a 6th regnal year, should be assigned to the late third century A.D., only a limited choice of dates is possible. Horion, son of Alexander, occurs in a few more late third century texts:

O. Mich. I 468: year 15, Mecheir 8 (2/3.II), crop of year 14

O. Mich. II 908: year 14, Me[] 16, crop of year 13

O. Mich. II 887: year 7, Epeiph 25 (19.VII), crop of year 6

O. Mich. II 873: year 2, Pharmouthi 14 (9.IV), crop of year 1

The first two texts cannot belong to any reign other than that of Gallienus (cf. BASP 16 [1979] 223-4); years 14 and 15 must refer, then, to A.D. 266/7 and 267/8; consequently, we date *O. Mich.* I 468 to 3.II.268 and *O. Mich.* II 908 to either 10.II.267 or 9.VIII.267.

With *O. Mich.* II 887 the situation is less simple: year 7 probably belongs to the same reign (A.D. 259/60), but we cannot exclude 7 Probus (A.D. 281/2) or even 7 Severus Alexander (A.D. 227/8) with absolute certainty. With a single regnal year 2 as presented by *O. Mich.* II 873 we face too many options and refrain from noting them all.

***O. Mich.* II 888:** for this text cf. above, on *O. Mich.* I 374. The ostrakon mentions a Ptollas, son of Sokrates (patronymic mostly restored) in a single regnal year 1 on a day (numeral lost) in Pharmouthi; he is given a receipt for transportation of the crops of a regnal year 6. In view of the range of Ptollas' attestations (A.D. 289-298) and the single regnal year numer-

Manes (cf. the name indices to *O. Mich.* I, p. 197), but there are a few alternatives. Especially interesting is the possible connection between *O. Mich.* I 159 and *O. Mich.* I 26 (ca. 283-5?). Should one restore Onnophris' name also in *O. Mich.* I 159? A year 14 in the third century may be related to either 14 Gallienus (A.D. 266/7) or to 14 Severus Alexander (A.D. 234/5).

als involved we think that this text most likely dates from the early 280's or later 270's. Year 6 could refer, then, to the reign of Aurelian (year 6 = A.D. 274/5) or Probus (year 6 = A.D. 280/1); a date in Pharmouthi in a single year 1 is compatible not only with the emperor Tacitus (date: III-IV.276) but also with Carus (date: III-IV.283) or even Diocletian (date: III-IV. 285). Much depends on how much time may have elapsed between the actual harvest and the transportation of the crops. The most regular interval (1 year) suits a date of the ostrakon in the reign of Tacitus (A.D. 276) and the crop of the 6th year of Aurelian (A.D. 275; see above on *O. Mich.* I 404). But the crop could also be that of 6 Probus (A.D. 281) with the ostrakon dated under Carus (283; with a two year interval between harvest and transportation). The first year of Diocletian, however, is a mere theoretical possibility since the interval between the harvest in A.D. 281 and A.D. 285, the year of the transportation, counts four years and is much longer than any such interval attested (see above on *O. Mich.* I 398).

***O. Mich.* II 908:** see on *O. Mich.* II 887.

***O. Mich.* II 928:** the editor reads the dating formula of this text as (ἔτους) κ Φαμ(ενὸθ) κε, i.e. March 21, 304 A.D. This date has been listed in *RFBE* 27 without further comment, though the use of a single regnal year stands in opposition to the conclusions reached in *BASP* 16 (1979) 221 *sub* (1) and 222 *sub* (6). T. Gagos, who upon our request checked the photograph, excludes year 20 of Caracalla (A.D. 211/2). In his letter from May 17, 1989, he writes, that "the script seems to belong to the late III/early IV century A.D., but early III cent. A.D. is rather unlikely." Moreover, he kindly provided us with a photo of the ostrakon which enabled us to confirm this. But as it turns out, the editor's reading of the numeral of the year as kappa is not compelling. Moreover, we do not agree with his interpretation of line 1 and his reading of line 2. Therefore, we here offer a revised transcript of the ostrakon:

- 1 [Πτολεμαῖος] Ἰουλί-
[νοῦ γενή(ματος)] ζ' (ἔτους) θη(αυροῦ) Καρανί-
[δος] διὰ καμήλων κάκ(κον)
4 [έν]α, (γίνετα) κάκ(κος) α. (ἔτους) α' Φαμ(ενὸθ) κε' .
- 1 [] Ἰουλία ed. 2 [] ἐν θη(αυρῷ) ed.

The formula of this document is paralleled by *O. Mich.* I 403 (25.III.283) and 404 (see above). For Ptolemaios, son of Ioulianos, see above on *O. Mich.* I 376 and 378. The chronological situation is the same as that set forth above, on *O. Mich.* I 404 (also cf. above on *O. Mich.* II 888): the year 6 of the crop is that of Aurelian, A.D. 274/5, with a harvest in the summer of 275, while year 1 in the dating may refer to Tacitus, A.D. 275/6 (Phamenoth 25: 21.III.276). Thus, this ostrakon is the earliest document for Ptolemaios, the son of Julianos, whose range is now A.D. 276-298.

As an argument in favour of the restoration of line 1 it may be recalled that at this place in the ostrakon we expect the name of the deliverer, and that the preserved part of the name Ioulia- definitely points into the direction of Ptolemaios' patronymic (cf. *O. Mich.* I, index nomenclum, p. 195).

***O. Mich.* III 1057 and 1058:** see above, n. 14.

Addendum: List of Date Corrections

Reference:		Original Date:	Corrected Date:
<i>O. Mich. I</i>	26	17.VI.284	late III
	158	27.IX.278 or 28.IX.287	27.IX.272 or 27.IX.278
	159	287/288	234/235 or 266/267
	177	late III	17.XI.297
	361	late III	22.III.276 or 22.III.293 or 22.III.285
	368	III	4.III.252?
	370	late III	27.III.284
	374	late III	27.XI.277 or 27.XI.284
	376	late III	5.I.278 or 5.I.285
	378	late III	23.IV.278
	381	late III	283/284 or 285/286 or 297/298
	386	late III	8.VII.279
	388	late III	7.XI.279
	390	late III	15.II.274 or 16.II.280
	398	9.XII.270?	9.XII.253
	404	30.IV.283?	30.IV.276
	405	1.V.283?	30.IV.285
	406	6.IX.284?	1.V. or 31.V.(?) 285
	408	285/286?	1.VIII.285
	447	6.IV.294	6.IV.277 or 6.IV.284
	468	2.II.299 or 2.II.307	3.II.268
<i>O. Mich. II</i>	752	III	24.II.207 or 25.II.268
	777	9(19).I.286	10(20).I.252
	806	late III	24.II.280
	870	late III	22.XI.278
	872	late III	27.VII.235 or 27.VII.238 or 27.VII.244
	875	late III	8.IV.278
	876	late III	11.IV.272 or 11.IV.278
	877	late III	13.IV.272 or 13.IV.278
	878	middle/late III	V-VI.253?
	879	middle/late III	I-II.254?
	880	late III	27.X.221 or 27.X.225 or 27.X.241
	881	late III	15.I.222 or 15.I.226 or 15.I.242
	883	late III	21.XII.280
	888	III-IV.283?	III-IV.276 or III-IV.283
	908	298 or 306?	10.II.267 or 9.VIII.267
	928	21.III.304	21.III.276
<i>O. Mich. III</i>	1057	middle/late III	22.II.270 or 22.II.277
	1058	middle/late III	28.III.270 or 28.III.277