Materiali e documenti

Atlante del Vicino Oriente antico

Lo straniero in Egitto e nel Vicino Oriente

Studi in onore di Loredana Sist

a cura di
Marco Ramazzotti

University Press

Sapienza Università Editrice

Collana Materiali e documenti 102

Serie Atlante del Vicino Oriente antico

Opere collettanee 2

Lo straniero in Egitto e nel Vicino Oriente

Studi in onore di Loredana Sist

a cura di
Marco Ramazzotti

SAPIENZA
UNIVERSITÀ EDITRICE
2024

Il volume è stato pubblicato con il contributo
di PRIN 2022 - 022BTKA9Y: *Marshlands, islands and marine coasts. Social complexities, tribal alliances and human mobility between Southern Mesopotamia and Eastern, South-Eastern Arabia during the 3rd and 2nd millennium BCE* (coordinatore: prof. Marco Ramazzotti).

Sapienza Università Editrice
Piazzale Aldo Moro 5 – 00185 Roma

www.editricesapienza.it
editrice.sapienza@uniroma1.it

Iscrizione Registro Operatori Comunicazione n. 11420
Registry of Communication Workers registration n. 11420

ISBN 978-88-9377-304-1

DOI 10.13133/9788893773041

Pubblicato nel mese di gennaio 2024 | *Published in January 2024*

In copertina | *Cover image*: rilievo nella tomba di Sheshonq all'Asasif (Tebe), foto di Franco Lovera.

Indice

4. Multicultural Synchronisms. Merchants from Italy and Egyptian Seamen in a Red Sea Port

Federico De Romanis

As expected of a site that played a crucial role in the commercial relationships between the *Erythrà thálassa*[1] and the Mediterranean Sea for almost eight centuries, the excavations at Berenice on Egypt's Red Sea coast have regularly produced remarkable evidence about these trading ventures. Recently, inscriptions unearthed inside or near the building now identified as an Isis temple seem particularly valuable for the history of Indian Ocean trade. Two of these inscriptions, found in the 2015 season and published with excellent commentary by Rodney Ast and Roger S. Bagnall, highlight the key role of the *grammateis* who worked for the Red Sea tax department.[2] Four more inscriptions, found in the 2018-2020 seasons and accurately published with learned commentary by Rodney Ast,[3] now add relevant evidence about an individual or a family that was certainly among the prime movers of Erythraic trade during the Julio-Claudian epoch and, as appropriately highlighted by the editor, had close connections with Italy. It seems therefore apt to present a few remarks on them in a volume dedicated to foreigners in Egypt. I hope that this choice will be appreciated by the colleague (and friend) honoured with this volume.

***

1 For brevity's sake, I use here the ancient hydronym *Erythrà thálassa* to designate the ensemble of the Red Sea and the Indian (and Pacific) Ocean, and the adjective Erythraic to indicate pertinence to this maritime space.

2 Ast and Bagnall 2015.

3 Ast 2021.

Two of the four new inscriptions under consideration here (Ast's inscriptions no. 2 and no. 3) are engraved on bases symmetrically positioned—no. 2 on the left (south) side, no. 3 on the right (north) side—along the rear (west) wall of the temple courtyard.[4] They were both erected on 6 Mesore AD 51, through the freedman Epaphroditus and on 'behalf of those who sail', by the *Erythrà thálassa* merchant M. Laelius Cosmus. The honorand in Ast's inscription no. 2 is the emperor Claudius, characterized as 'the saviour'.[5] The name of the honorand in Ast's inscription no. 3 was in the first two or three lines of text now missing.[6] Cosmus' name and qualification are the only details that survive in another fragmentary epigraph (Ast's inscription n. 4) on blocks that had been located along the south wall of the temple courtyard.[7] Last but not least, the lintel inscription (Ast's inscription no. 1) has revealed that the temple was built (or rebuilt), sometime between AD 15 and 29, by a M. [---] Cosmus, who may well have been the same *Erythrà thálassa* merchant who set the AD 51 dedications, or else a homonymous relative.[8]

Between the time of the temple's (re)construction under Tiberius and the installation of the two dedications dated 6 Mesore AD 51, evidence of the continuous involvement of a M. Laelius Cosmus (or several MM. Laelii Cosmi) in the Erythraic trade is further supported by

---

[4] See Ast 2021: 148, Fig. 3. The symmetry is only slightly altered by the larger size of the base of inscription no. 3, which was 4 cm wider and 13 cm higher than the base of inscription no. 2, see Ast 2021: 150; 152.

[5] Τιβέριον Κλαύδιον/Καίσαρα Σεβαστὸν/Γερμανικὸν Αὐτοκράτορα/ τὸν σωτῆρα. Μᾶρκος Λαίλιος Κόσ/μος ἔμπορος Ἐρυθρᾶς θα/λάσσης διὰ Ἐπαφροδίτου ἀπελευ/θέρου ἐπὶ Οὐεργειλίου Καπίτω/νος ἡγεμ[όνος καὶ /Πο]πλίου Ἰουλί/ου Ρούφου ἐπάρχου Βερνείκης ὑπὲρ/ τῶν πλοιζομένων vac. (ἔτους) ια Τιβερίου/ Κλαυδίου Καίσαρος Σεβαστοῦ Γερμα/νικοῦ Αὐτοκράτορος Μεσορὴ ζ̄ Σεβαστῆι;

[6] ---------- /Μᾶρκος Λαίλι[ος Κόσμος/ ἔμπορος Ἐρυθρᾶς/ θαλάσσης διὰ Ἐπα/φροδίτου ἀπελευθέ/ρου ἐπὶ Οὐεργιλλίου/Καπίτωνος ἡγεμό[ν]/ος καὶ Ποπλίου Ἰού[ί]/ου Ρούφου ἐπάρχου/ Βερενίκης ὑπὲρ τῶν/ πλοιζομένων vac./ (ἔτους) [ι]α Τιβερίου Κλαυδίου/ Καίσαρος Σεβαστοῦ/ Γερμανικοῦ Αὐτοκράτορο[ς]/ Μεσορὴ ζ̄ Σεβαστῇ vac. Ast 2021: 152: 'The distance from the top of the stone to the top of the first preserved line of text is ca. 13 cm. Since letter heights range from 3.8-4.5 cm, we can presume that two to three lines are missing.'

[7] ----------/Μᾶρκος Λαίλιος/ Κόσμος ἔμπο/ρος Ἐρυθρᾶς θαλάσ/σης vac.

[8] ύ]πὲρ·Αὐτοκράτορος·Τιβερίου·/Κ]αίσαρος·Σεβαστοῦ·καὶ·Ἰουλίας/Σε]βαστῆς·Ἰσιδι·θεᾷ·μεγίστηι·Μᾶρκος/ Λαίλιος·] Κόσμος·οἰκοδόμησεν·ἐκ τοῦ·ἰδίου[·]Ļ[1-2/ Τιβερίου ·Καί]σαρος·Σεβαστοῦ·μηνὸς· Σεβαστοῦ·Β·ἐπ ̣[ἀγαθῷ]. Ast 2021: 150 suggests AD 36 as *terminus ante quem*, but the votive formula implies that Iulia Augusta, who died AD 29, sometime after 30 January (Tac., *Ann.* 5.1; Cass. Dio 58.2.1; Plin., *NH* 14.60), was thought to be still alive, as in *SEG* 38.1678, of 15 Pharmuthi AD 29 from Akoris.

two ostraca from the Nicanor archive. In one, dated 30 Pachon AD 41, a M. Laelius Heraklas acknowledges receipt at Myos Hormos of a consignment of ten artabas of wheat for the account of M. Laelius Cosmus, as Ast now reads it.[9] In another, dated 19 Hathyr AD 34, a slave of a M. Laelius Hymenaeus acknowledges receipt in Berenice of six *keramia* sent to him from Koptos by Phnas, son of Paminis.[10] Both M. Laelius Heraklas and M. Laelius Hymenaeus may have been freedmen of M. Laelius Cosmus.

Cosmus' names suggest other significant connections, as pointed out by Ast.[11] The combination of his *praenomen* and *nomen* hints at an association with the Marci Laelii attested in Puteoli, the western hub for Erythraic commodities.[12] This further increases the number of first-century AD Erythraic traders with Italian—and in particular Campanian—connections.[13] As Ast correctly emphasizes, 'this new evidence of a possible Puteolan merchant working out of Berenike makes the connection between Puteoli and the Red Sea even stronger.'[14]

Ast notes that M. Laelius Cosmus has the same *cognomen* as the famous perfumer Cosmus, so often mentioned by Martial.[15] Ast himself makes clear, one shared onomastic component is not enough to infer a connection between the Erythraic merchant(s) and the fashionable perfumer.

Although the temple is in an Erythraic harbour and M. Laelius Cosmus styles himself as an Erythraic merchant, the two bases were actually set not by the dedicant himself but by one of his freedmen. Regardless of whether M. Laelius Cosmus was the same person as the (re)builder of the Isis temple under Tiberius, the dedicant of the AD 51 bases was probably too old and/or too rich to still be a traveling merchant himself. In all likelihood, by that time the label *ἔμπορος Ἐρυθρᾶς*

---

9 *O.Petr.Mus.* 127 = *O.Petr.* 260, on which see Ast 2021: 124.

10 *O.Petr.Mus.* 165.

11 Ast 2021: 145-146.

12 *AE* 1999: n. 453; 2016: n. 267; *CIL* X 1783; 2638; 2639; 2640; 2642; 2642; 2820b.

13 Tchernia 1992: 293-301; De Romanis 1996a: 241-259; De Romanis 1996b; Orlando 2014: 148-203. No evidence has so far suggested that the involvement of merchants (or financiers) with Italian connections continued after the Julio-Claudian period.

14 Ast 2021: 146.

15 Mart. 1.87.2; 3.55.1; 82.26; 4.53.2.8; 7.41; 9.26.2; 11.8.9; 15.6; 18.9; 49.6; 12.55.7; 65.4; 14.59.2; 110.1; 146.1.

θαλάσσης referred to a merchant who delegated his overseas business activities to slaves and freedmen.[16]

The exact geographic extent of Cosmus' business dealings and the location from which he operated in AD 51 are difficult to determine. In previous years, Cosmus (or the Cosmi) used the ports of both Myos Hormos and Berenice, but it is uncertain whether he (or they) operated with just one ship sailing alternatively from Berenice and Myos Hormos to South Arabia and East Africa, or with several ships bound simultaneously for different Erythraic destinations.[17] Furthermore, the Puteolan connections of M. Laelius Cosmus and his characterization as a merchant of the *Erythrà thálassa* may resolve differently, depending on whether Cosmus was an offspring of the Puteolan Laelii settled in Alexandria or a resident of Puteoli. If he lived in Alexandria, he may have limited the scope of his business to importing commodities from the *Erythrà thálassa* to Egypt and reselling them in Alexandria. If he dwelt in Puteoli, he may also have exported Erythraic products to Italy, especially if he was also in the perfume industry. As for his freedman Epaphroditus, he clearly facilitated the Erythraic commercial activities of his patron, but his specific functions are not defined. However, assuming that he was in Berenice when the two bases were dedicated, some suggestions may be proffered.

The date of 6 Mesore AD 51 is significant on multiple levels. First, it goes back to a period in which Claudius' marriage with Agrippina had tangible consequences on the representation and perception of Roman imperial power. Married to Claudius in AD 49, awarded the *cognomen* Augusta in AD 50, Agrippina was perceived thereafter as a co-holder of imperial power.[18] Among the evidence regarding the emphasis given to Agrippina Augusta between AD 50 and 54,[19] it is worth

---

16 Gaius apud *Dig*. 40.9.10 pr.

17 For ships alternating destinations (Adulis in January, Muza or Cane in September) and returns (to Berenice in late spring to Myos Hormos in late fall), see De Romanis 2020: 54-8.

18 She is characterized as βασίλισσα by one of her freedmen in Jericho: *SEG* XXXI 1405; as *parti a maioribus suis imperii socia* in Tac., *Ann.* 12.37. The *cognomen* Augusta was granted to Livia only after Augustus' death: Tac., *Ann.* 1.8.

19 See, e.g., Robert 1960: 285-315; Hahn 1994: 186-207; 348-354; Mikocki 1995: 38-42; 178-183; 239; Rose 1997: 69-70; Cat. 5, 42, 45, 49, 50, 54, 57, 72, 73, 80, 103, 105; Boschung 2002: 26 (2.11); 79 (21.10); 87 (25.15); 101 (33.5); 118 (n. 660); 120 (42.6; 15); 125-6 (43.2); 135 (56.2); 157-8 (I. 69-71; 73; 90); 162 n. 1008; Kajava 2002; Ginsburg 2006: 55-105; Heil 2013; Belli Pasqua 2018.

recalling here the Alexandrian coins with her portrait and the legend ΑΓΡΙΠΠΙΝΑ CEBACTH or ΑΓΡΙΠ CEBAC, issued from AD 51/2, just a few months after the installation of the two bases in Berenice, together with those with Claudius' portrait and the legend TIB ΚΛΑV ΚΑΙ CEBAC ΓΕΡΜ(Α) or TIB ΚΛΑV.[20] Moreover, probably after AD 51 but before AD 55, the Red Sea tax farmer Demetrius named his son Agrippinus, seemingly in honour of the Augusta.[21]

Regardless of whether the lintel inscription and the AD 51 bases were set by the same person or by homonymous members of the same family, they came from people who were both 'by nature reverent towards the Augusti'[22] and devoted to Isis. This offers a clue for identifying the honorand of inscription no. 3. Ast remarks that 'we might expect that these lines honoured someone such as the emperor Claudius or the goddess Isis, or yet another person or deity, and that the blocks supported a statue'.[23] Especially considering that the votive formula of the lintel inscription mentions both Tiberius *and* Iulia Augusta, a double dedication set in AD 51 was very likely to participate in the general enthusiasm for Claudius' new wife.[24] Moreover, in a temple of a female divinity, the spatial correspondence of the two synchronic dedications very likely reflected the balanced charisma of the Augustan couple.

However, although a simple dedication to Agrippina Augusta as Claudius' wife cannot be excluded, it seems probable that M. Laelius Cosmus did not miss the chance to honour Isis as well.[25] Since in inscription no. 2 Claudius is just labelled with the attribute 'saviour', it seems more probable that in inscription no. 3 Agrippina was alluded to by qualifying Isis as Augustan (for instance, CEBACTHN ICIN/

---

[20] Agrippina: *RPC* 1.5188; 5190; 5192; 5194; 5196; 5199. Claudius: *RPC* 1.5187; 5189; 5191; 5193; 5195; 5198.

[21] Jos., *AJ* 20.147.

[22] Like the Alexandrians, in Claudius' letter, *P.Lond*. 6.1912 = *CPJ* 2.153, l.23: φύσει — εὐσεβεῖς περὶ τοὺς Σεβαστούς. Cf. ἡ εἰς τὸν Σεβαστὸν οἶκον ὁσιότης in Phil., *Flacc.* 49.

[23] Ast 2021: 152.

[24] Less likely is the hypothesis (suggested by two sets of duplicate dedications found in the same spot) of inscription no. 3 being a duplicate of inscription no. 2. If only 13 cm are missing between the top of the stone and the top of the first preserved line (see above n. 6), the 61 characters of the imperial titulature should be squeezed in three lines with tighter spacing and smaller lettering than the first extant line.

[25] *IGRRP* 1.621 suggests some connection between the cult of Isis and that of a *thea* Agrippina in Tomis, a sea-port that at least around AD 160 was regularly visited by Alexandrians (*IGRRP* 1.604): Christodoulou 2015: 179-183.

ΘΕΑΝ ΜΕΓΙΣΤΗΝ),[26] rather than explicitly named and identified with the goddess (for instance, ΑΓΡΙΠΠΙΝΗΝ ΣΕΒΑΣΤΗΝ/ΙΣΙΝ ΘΕΑΝ ΜΕΓΙΣΤΗΝ), as it happens, *mutatis mutandis*, in joint dedications in which both Augusti are assimilated to gods.[27]

The two bases of the Isis temple are also noteworthy for reasons that pertain to the development of Roman trade in the Indian ocean. At the time M. Laelius Cosmus set his dedication through his freedman Epaphroditus, the surging Erythraic trade was attracting the attention of the financial and intellectual *élites* of the empire. The systematic description of all the business opportunities along the *Erythrà thálassa* coasts, as put together by the author of the *Periplus Maris Erythraei*, may go back to a year not far from AD 51.[28] More specifically and importantly, it has been demonstrated that Pliny could write his remarkable chapter on the South India trade—included in the *Naturalis Historia* exactly because of its economic relevance—by drawing on oral sources who travelled from Alexandria to South India via Berenice between AD 48/9 and 51/2.[29]

It is worth recalling the key detail that anchors those travels to the years AD 48/9-51/2. Pliny fixes the deadline for the start of the return voyage from South India—a technical detail that was crucial for the management of those enterprises and the maritime loan contracts that financed them—with two calendric references, one according to an Egyptian calendar and the other according to the Roman calendar: *ex India renavigant mense Aegyptio Tybi incipiente, nostro Decembri, aut utique Mechiris Aegyptii intra diem sextum, quod fit intra idus Ianuarias nostras*.[30] The ships were supposed to start their return voyage 'at the beginning of the Egyptian month Tybi, which is our December, or at all events before the sixth day of the Egyptian Mechir, that is before January 13 in our calendar.'

---

[26] E.g., *SEG* 64.918: Ὁ δῆμος/ Τιβερίῳ Κλαυ/δίῳ Καίσαρι Σεβαστῷ/ Γερ(μ)ανικῶι καὶ Σεβαστῇ/ Ἀρτέμιδι Δηλίᾳ τὰ/ διπ---.

[27] E.g., *IG* XII 4.2.643: Τιβερίωι Κλαυδίωι Καίσαρι/ Σεβαστῶι Γερμανικῶι Διὶ / Σωτῆρι καὶ Ἀγριππείνηι / Σεβαστῇ Δήμητρι / Καρποφόρωι.

[28] The mention of the Nabataean king Malichus (*PME* 19) fixes the composition of the *Periplus Maris Erythraei* to the period between AD 39/40 and 69/70. With his continuous embassies and gifts, king Charibael managed to become the friend of several emperors: *PME* 23.

[29] Plin., *NH* 6.101-6, on which De Romanis1988: 5-19 and below. Pliny's oral (Plin., *NH* 6.105) sources were not aware (Plin., *NH* 6.102) of the *praesidia* built in AD 77, see Cuvigny et al. 2006: 11-12.

[30] Plin., *NH* 6.106.

The schedule given by Pliny neatly corresponds with the timing of the northeast monsoon in Kerala (south India),[31] but the way it is defined requires a comment. If the reference was to the standard calendar in Roman Egypt—the reformed Alexandrian calendar of 365¼ days introduced under Augustus—the approximation Tybi ≈ December is only very partially correct: the month of Tybi (from 27 December to 25 January or 28 December to 26 January in the years AD 8, 12, 16, 20, 24 etc.) shared far more days with January than with December. Furthermore, and more critically, the precise equation 6 Mechir = 13 January must simply be wrong: 6 Mechir was either 31 January or 1 February in the years AD 8, 12, 16, 20, 24, etc.

The only way the Egyptian month of Tybi can approximate the month December of the Julian calendar and that 6 Mechir can exactly correspond to 13 January would be to assume that the Egyptian dates refer to the revolving Egyptian calendar. Made up of only 365 days, the revolving Egyptian calendar lost one day every four years relative both to the fixed Alexandrian calendar and to the Julian Roman calendar. As a consequence, 6 Mechir can correspond to 13 January, but only in four specific years. The available evidence shows that the equation 6 Mechir = 13 January could be accurate only in AD 49, 50, 51, and 52. In those years, the month of Tybi of the revolving Egyptian calendar cycled from 9 December to 7 January of the Julian Roman calendar, which justifies the approximation *mense Aegyptio Tybi incipiente, nostro Decembri*.

It is unlikely that Pliny's oral source provided only dates from the Egyptian calendar and that Pliny himself translated those dates into the Roman calendar.[32] The present tense *fit* in the clause *quod fit — nostras* makes it clear that Pliny was not aware that 6 Mechir equates 13 January only for a period of four years every 1,460 years. It is apparent, instead, that Pliny mistakenly thought that 6 Mechir always equated with 13 January. In all likelihood, therefore, Pliny just repeated what he heard—and what he heard reflects the way time was measured during all the Berenice-South India-Berenice voyage.

Keeping an accurate measurement of the time spent during each stage of the journey was of the utmost importance precisely because it was critical to start the sea voyages to and from India within a time

---

31 De Romanis 2020: 65-67.

32 *Pace* Desanges 2012: 68.

frame that ensured minimal risk.[33] Pliny's curious formula reveals the cultural diversity of the participants who cooperated to ensure the success of these ventures: the Egyptian crews, who were apparently accustomed only to the revolving Egyptian calendar, had to work in concert with the (agents of the) Roman merchants from Italy, who relied on the Julian Roman calendar.[34]

No one should be too surprised by the conclusion that Egyptian crews sailing between Berenice and South India continued to use the Egyptian revolving calendar in the mid first cent. AD. Although the reform introducing the Alexandrian fixed calendar had been widely accepted, there is evidence to show that, especially in geographically remote areas and in social contexts still attached to ancient religious traditions, some social circles would resist the change. The preference for the revolving Egyptian calendar may have been favoured by the endurance of local religious cults and festivals synchronised to it,[35] but it is not a stretch to infer that the local Egyptians used the revolving calendar for purposes other than religious rites. In fact, Pliny's passage is not the only evidence showing that the old calendric system was used for secular matters as well.[36] We must therefore entertain the likelihood that, at least in certain communities, the revolving calendar served as the basis for the entire social schedule.

Since the names and the sequence of the months are the same in the revolving Egyptian and the fixed Alexandrian calendars (they differ only in that every four years the latter has a sixth epagomenal day), it would be theoretically impossible – barring any other evidence – to determine whether a document is dated using the old or the new calendric system. The negative consequences of this potentially paralysing dilemma have long since been discounted by Ulrich Wilcken, who,

---

33 The maritime loan contracts for South India certainly foresaw special conditions in case the ship could not start the return voyage by 13 January: De Romanis 2020: 168-170.

34 De Romanis 1988: 5-19.

35 Thus was the σπονδεῖον of 9 Epeiph in *SB* 1.5252 (AD 65, Neilupolis). Artists hired for a time period (a festival?) specified according to the revolving calendar, *P.Gen*. 1.73 = *Chrest.Wilck*. 496, (Philadelphia, 2nd-3rd cent. AD); *P.Corn*. 9 (Philadelphia, A.D. 206); *P. Grenf*. 2.67 (AD 237 Bacchias); *P.Mil*. 2.47 (3rd cent. AD, Thraso). For a rite linked to 28 Thoth of the revolving calendar, see Plin., *NH* 27.105.

36 E.g., *P.Grenf.* 2.59 (apprenticeship contract, AD 188, Socnopaiu Nesos); *BGU* 7.1717 (account, 2nd-3rd cent. AD, Philadelphia); *P.Nekr.* 1 (loan, AD 237?, Hibis); *P.Kellis* 1.33 (lease, AD 369, Kellis); 34 (sale, AD 315, Kellis); 46 (loan, AD 350-399, Kellis).

based on the number of documents dated according to both the fixed Alexandrian and the Julian Roman calendars, posited what has since become a universally accepted rule: unless reference to the Egyptian revolving calendar is made explicit, a calendric date in a document from Roman Egypt must refer to the fixed Alexandrian calendar.[37]

It must be stated categorically that the common practice is sound and most of the time certainly correct, since there is ample evidence showing that the fixed calendar was widely predominant in Roman Egypt. The fact remains, however, that such an expectation relies on an ultimately unwarranted assumption, because it can neither be proven, nor is it likely,[38] that the revolving Egyptian calendar was used *only* when a specification like κατ᾽ἀρχαίους, ἀρχαίων, κατ᾽ Αἰγυπτίους, Αἰγυπτίων, *p3 rmt Kmj*, *ỉbd ỉ3w* followed the date.[39]

Wilcken's assertion that 'vielleicht einmal in einem weltentlegenen Neste ein eingefleischter Aegypter in privaten Schreibereien das Datum des Wandeljahres auch ohne κατ᾽ἀρχαίους oder dergleichen geschrieben habe'[40] exposes his misconceptions about the way the re-

---

[37] Wilcken 1899: 796: 'Mir scheint somit die genauere Untersuchung der vorliegenden Doppeldaten ergeben zu haben, dass wir berechtig sind, überall da, wo uns ein Monat ohne irgend welche nähere Bezeichnung entgegentritt, ihn nach dem festen Jahre des Augustus zu berechnen.' Similar conclusions in Hohmann 1911: 62; Hagedorn and Worp 1994: 255.

[38] Indeed, it is demonstrably false. The two inscriptions from El-Hosh, *I.Portes* 114 and 115 were apparently engraved the same day. The Egyptian revolving year is silently referred to in *A.É.* 1954, 121a (De Romanis 2001, 9-36) and *SB* 24.15919r ll. 1-2 (Worp 1997, 1014-1018). Furthermore, it may be wondered whether the Psais who wrote *SB* 24.15919r ll. 1-2 used a different calendar in *SB* 24.15919v, l. 9, or whether the two *proskynemata* engraved by the priest Besarion in Kertassi—one (*SB* 5.8468), in AD 214, with date (17 Pharmuthi) followed by the specification κατ᾽ἀρχαίους, and another (*SB* 5.8473), in AD 216, with date (22 Pharmuthi) without specification—referred to two different calendars. For Demotic horoscopes from Narmuthis and Medinet Habu silently based on the revolving calendar, see below nn. 51.

[39] Diachronic characterizations (κατ᾽ἀρχαίους, ἀρχαίων, *ỉbd ỉ3w*) in *P.Oxy.* 31.2555 (Oxyrhynchus, AD 46); *O.Berlin* P. 6152 (AD 57); *SB* 1.3462 (AD 154); *I.Fay.* 1.88 (AD 180, Karanis); *PSI XVII Congr.* 15 (AD 181, ?); *P.Corn.* 9 (AD 206, Philadelphia); *Chr. Wilck.*497 (AD 237, Bacchias*); P.Prag.* 3.240 (AD 250, Theadelphia); *SB* 24.15919 (AD 267 or 268); *P.Oxy.* 61.4256 (AD 269-275); *O.Kell.* 145 (AD 294); *P.Mil.*2.47 (3rd cent.); *P.Gen.*²1.73 (3rd cent.). Synchronic characterizations (κατ᾽ Αἰγυπτίους, Αἰγυπτίων, *p3 rmt n Kmj*) in *SB* 1.5252 (AD 65, Neilupolis); *P.Mil. Vogl.* 2.52 (AD 138, Tebtynis); *O.Narm.Dem*. 1.27 (AD 145?, Narmuthis); *SB* 1.790 (AD 154, Memphis); *P.Oxy.* 61.4249 (AD 172, Oxyrhynchus); *P.Grenf.* 2.59 (AD 188, Socnopaiu Nesos); *P.Mil. Vogl.* 3.202 (2nd cent. AD, Tebtynis); *BGU* 7.1717 (2nd-3rd cent. AD, Philadelphia); *O.Narm.* 1.72 (2nd-3rd cent. AD, Narmuthis); *P.Oxy.* 61.4251 (AD 244, Oxyrhynchus); *P.IFAO* 3.27 (2nd-3rd cent. AD, Arsinoites).

[40] U. Wilcken 1899: 797.

volving Egyptian calendar survived. A calendar is a dynamic social phenomenon. The revolving calendar did not survive because of the deliberate obstinacy of certain die-hard Egyptians, but rather because some social communities—however small, lower class, old-fashioned, peripheral, or segregated—kept on using it. In all likelihood, when members of these communities interacted amongst themselves, there was no need to remind one another what calendar they were using. More than likely, within those circles the use of the revolving calendar was *not* specified.

Specifications like κατ᾽ἀρχαίους, or κατ᾽ Αἰγυπτίους, ἀρχαίων, Αἰγυπτίων, *p3 rmt Kmj*, *ỉbd ỉ3w*, as well as, *e contrario*, κατὰ Καίσαρα, καθ᾽ Ἕλληνας, Ἑλλήνων, *p3 wjnn*,[41] would have to be added only in contexts that were perceived as ambiguous— that is, when the writer feared that the uninformed reader might mistake the calendar he was referring to. Such specifications occur: in some birth notes and horoscopes,[42] to prevent misunderstandings between astrologers and clients;[43] In letters or written messages

---

[41] *P.Oxy.* 4.804 (4 BC, Oxyrhynchus); *P.Oxy.* 2.235 (AD 15/37, Oxyrhynchus); *SB* 18.13128 (AD 80, ?); *P.Fam.Tebt.* 12 (AD 112, Tebtynis); *P.Oxy.* 61.4239 (AD 130, Oxyrhynchus); *P.Mich.* 8.482 (AD 133, ?); *SB* 18.13743 (AD 147, ?); *BGU* 7.1655 (AD 169, Philadelphia); *P.Oxy.* 47.3353 (AD 179, Oxyrhynchus); *PSI XVII Congr.* 15 (AD 181, ?); *BGU* 2.632 (2nd cent. AD, Arsinoites); *O.Narm. Dem.* 2.53 (AD 196?, Narmuthis); *OMM* 871 (pers. comm. by M.C. Betrò); *PSI* 6.765 (AD 284, ?); *P.Cair.Isid.* 132 (3rd cent. AD, Karanis); *P.Kellis* 1.40 (AD 306/7, Kellis); *O. Douch.* 4.433 (AD 329, Kysis); *P.Kellis* 1.8 (AD 362, Kellis); *SB* 26.16826 (AD 392, Kellis); 16827 (around AD 392, possibly AD 388, Kellis).

[42] Use of the fixed calendar is specified in: *P.Oxy.* 4.804 (4 BC, Oxyrhynchus); *SB* 18.13128 (AD 78 and 80, ?); *P.Oxy.* 61.4239 (AD 130, Oxyrhynchus); *SB* 18.13743 (AD 147, ?); *P.Oxy.* 47.3353 (AD 179, Oxyrhynchus); *PSI* 6.765 (AD 284, ?); use of the revolving calendar is specified in: *BGU* 3.957 (10 BC, Heracleopolis Magna); *O.Berlin P.* 6152 (AD 57, ?); *P.Vindob. G* 46005 (AD 79/80, ?); *P.Hamb.* 1.96 (AD 145, ?); *P.Oxy.* 61.4249 (AD 172, Oxyrhynchus); *WO* 2.1602 (AD 207, Heracleopolis); *P.Oxy.* 61.4251 (AD 244, Oxyrhynchus); the date in the fixed calendar is followed by the date in the revolving calendar: *P.Oxy.* 2.235 (AD 15-22, Oxyrhynchus); *P.Oxy.* 31.2555 (AD 46, Oxyrhynchus); *P.Lond.* 1.130 (AD 81, ?); *P.Paris* 19bis (AD 137, Thebes?); *P.Fay.* 1.139 (AD 161, Euhemeria); *PSI XVII Congr.* 15 (AD 181, ?); *P.Aberd.*13 (AD 187, ?); the date in the revolving calendar is followed by the date in the fixed Alexandrian calendar: *O.Douch* 4.433 (AD 329, Kysis); *P. Kell.* 1.84 (AD 373, Kellis); *SB* 26.16827 (AD 388?, Kellis); *SB* 26.16826 (AD 392, Kellis). In *SB* 26.16829 (AD 364, Kellis) dates in both calendars were recorded, but it is unclear which of the two calendars was mentioned first.

[43] A different explanation is suggested by Hagedorn and Worp 1994: 253: '[…] möglicherweise, weil man auf Planetentafeln und ähnliche Hilfsmittel, die schon vor der Reform des Augustus geschaffen worden und auf die neuen Verhältnisse nur umständlich zu übertragen waren nicht verzichten wollte.' However, the greater convenience for the astronomical computations of the revolving calendar may account for its use in the planetary tables, but fails to explain why the majority of

between people who belonged to different social circles;[44] in legal contracts signed in niche locations where the revolving calendar endured;[45] in inscriptions set in places where the revolving calendar somehow persisted or in *proskynemata* engraved in pilgrimage places;[46] in large landowners' ledgers and in other accounts, in matters pertinent to people who followed the revolving calendar; [47] in

---

Greek horoscopes silently refer to the fixed calendar (Neugebauer and Van Hoesen 1987: 166; Jones 1999: 250), whereas several 2nd cent. AD Demotic horoscopes from Narmuthis silently refer to the revolving calendar (below n. 51). Out of four Demotic horoscopes from Medinet Habu related to births in Augustan or Tiberian years (Neugebauer 1943), three (nn.1, 3, 4) silently refer to the fixed calendar and one (n.2), again silently, to the revolving calendar. If they were all written by the same person (Neugebauer 1943: 120), we have to infer that the astrologer was able to operate with either calendar, seemingly adjusting to the client's preferences.

44 Use of the fixed calendar is specified in: *P.Mich.* 8.482 (AD 133); *BGU* 2.632 (Arsinoites, 2nd cent. AD); *P.Cair.Isid.* 132 (3rd cent. AD); *O.Narm.Dem.* 2.53 (AD 197, Narmuthis); use of the revolving calendar is specified in: *P.Mil.Vogl.* 3.202 = *SB* 6.94 (2nd cent. AD, Tebtynis); *O.Narm.Gr*. 1.72 (2nd-3rd cent. AD, Narmuthis); *O.Narm.Dem*. 1.27 (AD 145?, Narmuthis); dates in the fixed calendar followed by dates in the revolving calendar: *P.Ryl.* 2 p. 381 (AD 40, Arsinoites), where the sender Ammonius translates into dates of the revolving calendar only the dates (ll. 7-10) related to his instructions to the addressee Aphrodisius; the date of the letter (l. 18) is not translated, nor is its calendar (apparently the fixed one) specified. Other letters by the same sender (*P.Ryl.* 2.229; 230; 231) are equally dated without translation or specification.

45 Use of the revolving calendar is specified in *SB* 1.684 (only in the Demotic text, AD 31, Abydos); *SB* 1.5252 (AD 65, Nilupolis); 1011 (AD 148, El Hosh); *SB* 8.10168 = *I.Fayum* 1.88 (AD 180, Karanis); *P.Grenf.* 2.59 (AD 188, Socnopaiu Nesos); *P.Nekr.* 1= *P.Bodl.* 1.43 (AD 237?, Hibis); *BGU* 7.1717 (II-III cent. AD, Philadelphia); *P.Bodl.* 1.169 (AD 308, Hibis); *P. Kellis* 1. 8 (AD 362, Kellis); 33 (AD 369, Kellis); 34 (AD 315, Kellis); 37 (AD 320, Kellis); 41 (AD 310, Kellis); 46 (AD 350-399, Kellis).

46 Use of the revolving calendar is specified in: *SB* 1.4116 (a twelfth year, Hiera Sycaminos); *SB* 5.8468 (AD 214, Kertassi); *SB* 5.8499 (AD 228, Kertassi); date according to the fixed calendar followed by that according to the revolving one: *SB* 1.684 (AD 31, Abydos, only in the Demotic version); *Dem. Graf. Philae* 433 (AD 166-168?, Philae); month 'according to the Greeks' (day missing or ignored by the writer?) followed by unspecified date according to the revolving calendar: *SEG* 46.2102 (post AD 212?, Aïn Labakha). The titulature of *Dem. Graf. Philae* 433 is somehow faulty (see Grenier 1989: 68), but if the two emperors were *Parthici* (instead of *Armeniaci*) *maximi* and the omission of *Medicus* is just a mistake, a date posterior to March AD 166 would be in order.

47 Use of the revolving calendar is specified in: *P. Mil. Vogl.* 2.52 (AD 138, Tebtynis), where the allowance ὑπὲρ Φαρμοῦ(θι) Αἰγυπτ(ίων) (= from 21 Mechir to 20 Phamenoth of the fixed calendar) for the φύλαξ of Syros is recorded (l. 52) after an entry (l. 51) dated 8 Phamenoth; *P. Mil. Vogl.* 7.304 (AD 166, Tebtynis), where a λόγος ἔργων καὶ ἄλλων τῆς ληνοῦ dated (ll. 20-42) from 19 to 29 Thoth of the revolving calendar (= 2 to 12 Mesore of the fixed calendar) is included in the ledger after 23 Mesore AD 166 (1.10-3) of the fixed calendar; *BGU* 7.1717 (2nd-3rd cent. AD, Philadelphia), where the λόγος Κεφαλᾶτος is based on the revolving year; *P.Prag.* 3.240 (AD 250, Theadelphia), where the accounts repeatedly (ll. 11; 35; 51; 70) refer (despite the editor) to the revolving calendar.

a receipt of taxes paid in kind and in a testament;[48] in two mummy labels;[49] possibly, in a *kat'andra*.[50]

It is difficult to delineate precisely the geographic, social, and cultural boundaries within which use of the Egyptian revolving calendar persisted. The revolving Egyptian and the fixed Alexandrian calendars may have been followed by individuals in the same village. At Narmuthis, several demotic horoscopes silently refer to the revolving calendar,[51] and while use of the Egyptian revolving calendar is specified in one Greek and one Demotic ostracon,[52] use of the Alexandrian fixed calendar is specified in two Demotic ostraca.[53] At Socnopaiu Nesos, the Alexandrian fixed calendar can be proved in a κατ'οἰκίαν ἀπογραφή,[54] whereas the reference to the Egyptian revolving calendar is specified in an apprentice contract.[55] At Tebtynis, ledgers based on the fixed Alexandrian calendar include entries referring to the revolving Egyptian calendar.[56]

At Philadelphia, a couple of artists' contracts and an account show explicit references to the revolving calendar,[57] and use of the fixed Alexandrian calendar is specified in a testament.[58] It is worth noting that while Pliny determines the deadline for the return voyage from India with a synchronism between the revolving Egyptian and the Julian Roman calendars, the *Periplus Maris Erythraei* approximates the best tim-

---

[48] Specified use of the fixed calendar: *P.Fam.Tebt.* 12 (AD 112, Tebtynis); *BGU* 7.1655 (AD 169, Philadelphia).

[49] Specified use of the revolving calendar: *SB* 1.790 (AD 154, Memphis); 3462 (AD 154).

[50] It is uncertain if it is a case of specified use of the revolving calendar *P.IFAO* 3.27 (post AD 117, Arsinoites): see Hagedorn and Worp 1994: 245.

[51] *OMM* 285 (AD 153); 842 (AD 195); 972 (AD 139; 178); 1331 (AD 187), see Ross 2006: 158-163; Ross 2011: 47-51.

[52] *O. Narm. Gr*. 1.72; *O. Narm. Dem*. 1.27, ll. 2-3.

[53] *O. Narm. Dem*. 2.53; *OMM* 871 (pers. comm. by M.C. Betrò). Regarding *O.Narm.Dem*. 2.53, it would be tempting to take the number 10 at l. 2, expunged by the editor, as the date *p3 rmt n Kmj*. If the meaning of ll.2-3 *ḥ3.t-sp 5 10 sw 15 p3 w/jnn* were 'year 5, 10 (Mechir of the Egyptians), which is 15 (Choiak) of the Greeks' (the month of the Greeks is inferred from ll. 9-10), the fifty-five-day gap between the two calendars would bring it to the period 195/199 AD, which includes the fifth year of Septimius Severus. The two dates of *O. Narm. Dem*. 2.53 ll. 2 and 9 would then be 11 and 16 December AD 196.

[54] *P.Flor.* 3.301 (AD 175), provided the reading at l.25 ἐπαγο(μένων) ϛ is correct.

[55] *P.Grenf.* 2.59 (AD 188).

[56] *P. Mil. Vogl.* 2.52, l. 52 (Tebtynis, AD 138); 7.304, ll. 20-48 (Tebtynis, AD 166).

[57] *P.Corn*. 9 (AD 206); *BGU* 7.1717 (2nd-3rd cent. AD); *P.Gen.*²1.73 (3rd cent.). Cf. also n. 36.

[58] *BGU* 7.1655 (AD 169).

ings for the departures from Egypt by rough approximations (January = Tybi, July = Epeiph, September = Thot) of months from the Julian Roman and the fixed Alexandrian calendars.[59]

It follows that while the South India crews were guided by the revolving Egyptian calendar in a year between AD 48/9 and 51/2, the Alexandrian financiers (as prospective readers of the approximately contemporaneous booklet) would mostly be familiar with either the Roman Julian or the fixed Alexandrian calendars. Thus, the traders from Italy would have to juggle different Egyptian calendars over the course of their journeys to South India: in Alexandria they worked with people who used the fixed Alexandrian calendar, and while at sea they interacted with crew members who maintained the revolving Egyptian calendar.

How does all this impact the interpretation of the bases set up by M. Laelius Cosmus? The common practice of ascribing the fixed Alexandrian calendar to any text that does not explicitly refer to the revolving Egyptian calendar would exclude the possibility of consistency between the calendar used by the dedicants of the inscriptions in Berenice's Isis temple and the calendar used by the crews sailing between Berenice and South India. It is impossible to verify whether the date recorded in Eirenaeus' AD 49 inscription was based on the revolving or the fixed calendar. By contrast, the two AD 51 bases of M. Laelius Cosmus do provide an additional detail that may elucidate which calendar was used: the day on which they were set—6 Mesore AD 51—is designated as an Augustan day (a *hemera Sebaste*), that is, a public holiday for reasons linked to the imperial cult.

Ast has noted that while in no other document 6 Mesore appears as an Augustan day, there are several examples of the sixth epagomenal day (Μεσορὴ ἐπαγομένων ς) marked as such.[60] Since the additional day to align the Egyptian calendar to the solar cycle was added every four years in AD 3, 7, 11, 15, and so on, it would be tempting to conclude that the inscribed date is wrong and the two bases were actually

---

[59] *PME* 6; 14; 24; 39; 49; 56. The *Periplus* does not indicate sharp deadlines, just approximate best periods for departures, which explains why the author does not care to exactly synchronize the double calendric indications (January does not correspond exactly to Tybi, nor does July to Epeiph etc.). In all likelihood, his intent was to approximately signal the period in which a maritime loan contract for a specific destination had to be signed. The prime reference to the Julian Roman calendar shows that the work was written for a readership that included, first and foremost, businessmen from Italy.

[60] Ast 2021: 151. Occurrences for Augustan days in Snyder 1938; 1964a; Schwarz 1944; Nelson 1983 ad *BGU* 15. 2551, nn. 4, 5; Bagnall et al. 1990 ad *P.Col.* 8.212, n. 11.

set on Μεσορὴ <ἐπαγομένων> ς (29 August AD 51).[61] If this were correct, it would prove that Epaphroditus was using the fixed Alexandrian calendar.

Two more circumstances call to question the interpretation of the inscribed date as Μεσορὴ ς = 30 July. First, while most of the Augustan days celebrate anniversaries of members of the Augustan family, no member is known to have been born or done anything special on 30 July.[62] Second, if 6 Mesore corresponded here to 30 July, one might legitimately wonder why on earth the dedicant did not wait two more days to set the bases (one of which honoured Claudius) on the emperor's birthday (8 Mesore = 1 August)—certainly a far more appropriate and auspicious day.[63]

On the other hand, there are also reasons to be cautious before concluding that ἐπαγομένων was twice omitted. First, I am not aware of (nor does Ast cite) any other document in which an omission of ἐπαγομένων can be positively demonstrated. Second, while the abundance of empty space on both inscriptions makes it difficult to argue for an omission out of necessity, a mistake by negligence would require two extremely careless stonecutters working on site not very long before the two bases were meant to be installed.[64] Is it realistic to suppose

---

[61] Ast 2021: 151: 'although the Berenike inscriptions do not include the word ἐπαγομένων, it is tempting to assume that this was meant.' Ast informs me (email 9.26.2022) that he now considers the omission of ἐπαγομένων unlikely.

[62] Not Claudius (1 August: *Fasti Vallenses*; *Fasti Antiates minores*; *Feriale Duranum*; Suet., *Cl.* 2.1; Cass. Dio 60.5.3), not Agrippina minor (6 November: *Fasti Antiates Minores*; *Acta fratrum Arvalium* a. 57 and 58), not Nero (15, in Egypt 14, December: Snyder 1964b: 503-6), not Britannicus (11 or 12 February: Suet., *Cl.* 27.2), not Antonia minor (31 January: *Acta fratrum Arvalium* a. 38, cf. Anth. Gr. 6.345), not Drusus minor (7 October: *Feriale Cumanum*), not Germanicus (24 May: *Feriale Cumanum; Acta fratrum Arvalium* a. 38; *Feriale Duranum*; Suet., *Cl.* 11.2), not C. Caesar, L. Caesar, or Drusus maior (respectively, between 14 August and 13 September, between 14 June and 15 July, between 18 March and 13 April: Priuli 1980), not Tiberius (16 November: *Feriale Cumanum; Fasti Antiates minores; ILS* 154; *IGR* 3.933; Suet., *Tib.* 5; 26.1; Cass. Dio 57.18.2; 58.12.8), not Livia (30 January: *Acta fratrum Arvalium* a. 38; Tac., *Ann.* 6.5), not Augustus (23 September). Not, in case one wonders, Caligula (31 August: Suet., *Cal.* 8.1).

[63] For Καισαρείου η as Augustan day: *P.Oxy*. 34.2720; *P. Vind. Tandem* 22, l. 25. Following Claudius's permission to celebrate his birthday as an Augustan day (*P.Lond*. 6.1912, ll. 2.29-31, 10 November AD 41) it seems that the eighth day of every month was made an Augustan day, see Snyder 1938: 215-6. The building inscription of the Dendera temple was set in the Augustan day 8 Pharmuthi AD 42: *I. Portes* 30. The *Aqua Claudia* was dedicated *kalendis Augustis*: Frontin., *aq.* 13.

[64] Ast 2021: 152: 'The stonecutter responsible for it was not the same as in 2, as is clear from the lettering. Given the fact the two dedications bear the same date, we can conclude that more than one stonecutter was working on site at the time.'

that they inadvertently omitted a word as crucial as ἐπαγομένων and ended up writing a date that was thirty days earlier than the auspicious dedication day?

Taking all this into consideration, and remembering that seamen from Berenice used the revolving calendar in those years, does the hypothesis of a reference to the revolving calendar stand a chance? In AD 51, 6 Mesore of the Egyptian revolving calendar corresponded to *IV id. Iul.* (12 July = 30 July of the Alexandrian fixed calendar[65]) of the Roman Julian calendar, which was the day on which Caesar's birthday (actually 13 July) was officially celebrated.[66] I am not aware of another Egyptian document qualifying a date corresponding to 12 July as *hemera Sebaste*.

Nor does it seem consistent to postulate that a community that did not embrace Augustus' calendar reform honoured the day of Caesar's birthday as *hemera Sebaste*. Nonetheless, if the cultural distance between the donor and the prospective users of the dedications is taken into account, it may be conceivable that Epaphroditus elected to conform to the calendric traditions of the seamen for whom the dedications were set (ὑπὲρ τῶν πλοιζομένων). At the same time, this would not preclude the agent of a merchant from Italy who was 'reverent towards the Augusti' from pointing out the auspiciousness of the day in the Roman Julian calendar.

As discussed earlier, the deadline for the return voyage from India as indicated by Pliny strongly suggests that the (agents of) merchants from Italy and the Egyptian crews sailing between Berenice and South India sometime between AD 48/9 and 51/2 used both the revolving Egyptian and the Roman Julian calendars. In the Julian Roman calendar, 12 July was the only auspicious day immediately before the last possible departure to South India (around 20 July).[67] Marking a Roman anniversary in an inscription dated with the Egyptian revolving calendar would reflect the same sort of cross-cultural mingling revealed by the calendric equation at Plin., *NH* 6.106.

---

[65] Hagedorn and Worp 1994: 244.

[66] Degrassi 1963: 188-9 (*Fasti Amiternini*); 208 (*Fasti Antiates minores*); 270 (*Fasti Polemii Silvii*, but wrongly 8 July, *IIII idus* > *VIII idus*); 280-1 (possibly, *Feriale Cumanum*); 481-2; *P.Dura* 54, l.21 (*Feriale Duranum*); Hor., *epist.* 1.5.9; Cassius Dio 44.4.4; 47.18.5; Macrob., *Saturn.* 1.12.34; Lyd., *de mens.* 4.1; Weinstock 1971: 206-7. The celebrations for Caesar's birthday were moved to 12 July to avoid the coincidence with the last day of the *ludi Apollinares* (13 July): Cass. Dio 47.18.6.

[67] Plin., *NH* 6.104.

Pliny encountered (agents of) merchants from Italy active in the South India business (at the time, the most remunerative of the Erythraic destinations[68]) sometime between AD 48/9 and 51/2.[69] The epigraphic evidence from the Isis temple in Berenice shows that one M. Laelius Cosmus or more MM. Laelii Cosmi were prominent among the *Erythrà thálassa* traders between at least AD 28 and 51. If the dedicant of the two statues was in the South India business and had headquarters in Puteoli, his agents were not the only ones, but certainly among the prime sources, if one wanted to know more about South India trade.[70] If Pliny's oral source was not Epaphroditus himself, it was certainly someone like him.

Bibliography

Ast, R., 2021, Italian merchants and Roman trade at Berenike under the Julio-Claudian emperors, pp. 141-157 in Merchants, Measures and Money Understanding Technologies of Early Trade in a Comparative Perspective (eds. L. Rahmstorf, G. Barjamovic and N. Ialongo), vol. 2, Hamburg: Wachholtz. Available online at https://files.wachholtz-verlag.de/openaccess/9783529035418.pdf

Ast, R., Bagnall, R., 2015, The Receivers of Berenike. New Inscriptions from the 2015 Season, Chiron, 45, 171-185.

Bagnall, R.S., Renner, T.T., Worp, K.A., 1990, Columbia Papyri VIII, Atlanta GA: Scholars Press.

Belli Pasqua, R., 2018, Forme della propaganda imperiale nel Dodecaneso. Un ritratto di Agrippina minore da Kos, Archeologia Classica, 69, 333-56.

Boschung, D., 2002. Gens Augusta. Untersuchungen zu Aufstellung, Wirkung und Bedeutung der Statuengruppen des julisch-claudischen Kaiserhauses, Mainz: von Zabern.

Christodoulou, P., 2015, Sarapis, Isis and the Emperor, in Romanising Oriental Gods? Religious transformations in the Balkan provinces in the Roman period. New finds and novel perspectives. Proceedings of the International Symposium, Skopje, 18-21 September 2013 (eds. A. Nikoloska, S. Müskens), Skopje: Macedonian Academie of Science and Arts, University of Leiden, 167-211.

[68] Plin., *NH* 6.101.

[69] In AD 52, Pliny was in Italy: *NH* 33.63; 36.124-5, Tac., *Ann.* 12.56.

[70] A visit to Puteoli by Pliny between Claudius' last years and Nero's first years is not incompatible with what we know about his life and career, on which see De Romanis 1991/4. In AD 52, he attended the *naumachia* in the Fucino lake: Plin., *NH* 33.63; 36.124-5; a sojourn in Campania on 30 April 59 d.C. may be inferred from Plin., *NH* 2. 180.

Cuvigny, H., Brun J.-P., Bülow-Jacobsen A., Cardon D., Fournet J.-L., Leguilloux M., Matelly M.-A., Reddé M., 2006, La route de Myos Hormos. L'armée romaine dans le désert oriental d'Égypte. *Praesidia* du désert de Bérénice, Cairo: Institut Français d'Archéologie Orientale.

Degrassi, A., 1963, Inscriptiones Italiae. XIII 2. Fasti et Elogia, Roma: Istituto Poligrafico dello Stato.

De Romanis, F., 1988, Romanukharaṭṭha e Taprobane. Sui rapporti Roma-Ceylon nel I sec. d.C., Helikon 28, 5-58.

De Romanis, F., 1996a, Cassia, cinnamomo, ossidiana. Uomini e merci tra Oceano Indiano e Mediterraneo, Roma: L'Erma di Bretschneider.

De Romanis, F., 1996b, Graffiti greci da Wādi Menīḥ el-Ḥēr. Un Vestorius tra Coptos e Berenice, Topoi 6, 731-745.

De Romanis, F., 2012, Julio-Claudian Denarii and Aurei in Campania and India, Annali dell'Istituto Italiano di Numismatica, 58, 161-192.

Desanges, J., 2012, L'excursus de Pline l'Ancien sur la navigation de mousson et la datation de ses sources, in Autour du Périple de la mer Érythrée. Topoi. Orient-Occident. Supplément 11, 63-73.

Ginsburg, J., 2006, Representing Agrippina: Constructions of Female Power in the Early Roman Empire, Oxford: Oxford University Press.

Grenier, J-C., 1989, Les titulatures des empereurs romains dans les documents en langue égyptienne, Bruxelles: Fondation Égyptologique Reine Élisabeth.

Hagedorn, D., Worp, K., 1994, Das Wandeljahr im römischen Ägypten, Zeitschrift für Papyrologie und Epigraphik, 104, 243-255.

Hahn, U., 1994, Die Frauen des römische Kaiserhauses und ihre Ehrungen im griechischen Osten anhand epigraphischer und numismatischer Zeugnisse von Livia bis Sabina, Saarbrücken: Saarbrücker Druckerei und Verlag.

Heil, M., 2013, Agrippina Und Kos. Eine Inschrift Und Ihre Geschichte, Zeitschrift Für Papyrologie und Epigraphik, 184, 183-192.

Hohmann, F., 1911, Zur Chronologie der Papyrusurkunden (römische Kaiserzeit), Berlin: F. Siemenroth.

Jagenteufel, A., 1958, Die Statthalter der römischen Provinz Dalmatia von Augustus bis Diokletian, Wien: Osterreische Akademia der Wissenschaften.

Jones, A., 1999, Astronomical Papyri from Oxyrhynchus, Philadelphia: American Philosophical Society.

Kajava, M., 2002, Eueteria Sebasta in Mytilene, Latomus 6(4), 919-928.

Mikocki, T., 1995, Sub specie deae. Les impératrices et princesses romaines assimilées à des déesses. Étude iconologique, Rome: Giorgio Bretschneider.

Neugebauer, O., 1943, Demotic horoscopes, Journal of the American Oriental Society, 63, 119-120.

Neugebauer, O., and Parker, R. A. 1968, Two Demotic Horoscopes, The Journal of Egyptian Archaeology, 54, 231-235.

Neugebauer, O. and Van Hoesen, H.B., 1987, Greek Horoscopes, Philadelphia.

Orlando, P., 2014, Peregrini a Puteoli e mercatores puteolani nel Mediterraneo (I-III d.C.), Tesi di dottorato: Università degli Studi di Napoli 'Federico II', available at http://www.fedoa.unina.it/9876/).

Priuli, S., 1980, Osservazioni sul feriale di Spello, Tituli, 2, 47-80.

Robert, L., 1960, Recherches épigraphiques, Revue des Études Anciennes, 62, 276-361 (= Opera Minora Selecta, Amsterdam 1969, 792-877).

Rose, B. 1997, Dynastic Commemoration and Imperial Portraiture in the Julio-Claudian Period, Cambridge.

Ross, M., 2006, An Introduction to the Horoscopic Ostraca of Medînet Mâdi, Egitto e Vicino Oriente, 29, 147-180.

Ross, M., 2011, A Provisional Conclusion to the Horoscopic Ostraca from Medînet Mâdi, Egitto e Vicino Oriente, 34, 74.

Schwartz, J., 1944, Dies Augustus, Revue des Études Anciennes, 266-279.

Snyder, W.F., 1938, HMEPAI ΣΕΒΑΣΤΑΙ, Aegyptus, 18, 197-233.

Snyder, W.F., 1964a, Progress report on the Ἡμέραι Σεβασταί, Aegyptus, 44, 145-169.

Snyder, W.F., 1964b, Nero's Birthday in Egypt and His Year of Birth, Historia, 13, 503-506.

Tchernia, A., 1992, Le dromadaire des Peticii et le commerce oriental, Mélanges de l'École Française de Rome. Antiquité, 104, 293-301.

Weinstock, S., 1971, Divus Julius, Oxford: The Clarendon Press.

Wilcken, U., 1899, Griechischen Ostraka, Leipzig, Berlin: Gieseke & Devrient.

Worp, K.A., 1997, A New Wooden Board from the Temple at Kellis, in Akten des 21. Internationalen Papyrologenkongresses (Kramer, B., Luppe W., Maehler, H. eds.), Stuttgart, Leipzig: Teubner, 3, 1014-1018.