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The Impact of the Third Century Crisis on the Roman International Trade with the East

This is the author's manuscript

Original Citation:

Availability:

This version is available http://hdl.handle.net/2318/137743 since 2018-04-04T17:12:25Z

Publisher:

Brill

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12 October 2024

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VOLUME 7

This book is printed on acid-free paper.

ISSN 1572-0500
ISBN 978 90 04 16050 7

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THE IMPACT OF THE THIRD CENTURY CRISIS ON THE INTERNATIONAL TRADE WITH THE EAST

Dario Nappo

The commerce between the Roman Empire and the East was a flourishing one. From the far East came silk, spices and other similar goods. This commerce has frequently been described as a trade in luxuries, the result of decadent tastes and desires, especially of the Roman élites. We should, however, be careful in applying terms such as 'luxury goods' indiscriminately to these items. Some goods were indeed luxury goods, but on many occasions these commodities had medicinal or religious applications.[1]

The Romans were not the first to recognize and exploit lucrative trade opportunities with Eastern regions. Ptolemy II Philadelphus and his descendants constructed ports along the Red Sea. Through these ports came exotic merchandise, including the elephants and gold that Ptolemy II used to wage war and pay his mercenary troops.[2] On the Arabian side of the Red Sea, the Nabatean kingdom had many commercial relations with South Arabia, from which it imported some spices, especially incense.[3] But when Octavian added Egypt to the Roman Empire in 30 B.C., the Romans quickly became the dominant force in the East-West trade.[4] From that moment onwards, they could use their knowledge of the monsoon winds to improve the imports of goods from the East.[5]

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[1] S.E. Sidebotham, *Roman Economic Policy in the Erythra Thalassa. 30 B.C.–A.D. 217* (Leiden 1986), 20–21; W. Ball, *Rome in the East: the Transformation of an Empire* (London and New York 2000), 130; G.K. Young, *Rome's Eastern Trade* (London and New York 2001), 14–17.

[2] Sidebotham 1986, op. cit. (n. 1), 2–7; S.E. Sidebotham 'Ports of the Red Sea and the Arabia-India trade', in V. Begley and R.D. De Puma, *Rome and India* (New York 1991), 12–15; F. De Romanis, *Cassia, Cinnamomo, Ossidiana* (Roma 1996), 139; S.M. Burstein, 'Ivory and Ptolemaic exploration of the Red Sea. The missing factor', *Topoi* 6 (1996), 799–807.

[3] N.H.H. Sitwell, *The World The Romans Knew* (London 1984), 83–84.

[4] Strabo, *Geographia* 2.5.12. See Sidebotham 1986, op. cit. (n. 1), 18; De Romanis 1996, op. cit. (n. 2), 167.

[5] L. Casson, 'Rome's Trade with the East: The Sea Voyage to Africa and India', *Transactions of the American Philological Association* 110 (1980), 27; G.W. Bowersock, *Roman*

At the height of the Roman imperial age, several main ports were operating on the Red Sea coast. Although most of these were built by the Ptolemies and the Nabateans, it was the Romans who greatly expanded their economic importance. Many literary sources help to reconstruct how this 'harbour system' worked during the first two centuries A.D.: the most important are Strabo's *Geography*, Pliny's *Naturalis Historia*, Ptolemy's *Geography* and, particularly the anonymous *Periplus Maris Erythraei*. According to Ptolemy's *Geography*, these ports were from north to south Clysma, Philoteras, Myos Hormos, Leukos Limen, Nechesia and Berenike (on the Egyptian side); and Aila and Leuke Kome (on the Arabian side).[6]

So, starting at the Egyptian coast, the first port was Clysma, located at the northernmost point on the Red Sea, very close to modern Suez. It was founded in the Ptolemaic age, but was apparently not greatly utilized before the end of the second century A.D.[7] The site of the Ptolemaic town of Philoteras has not been yet discovered. Strabo says that it was located before the "hot, salt springs",[8] which seem to point to a place not far from Aïn Sukhna (Hot Spring) some 50 km south of modern Suez. Several modern scholars suggest that it is possibly situated to the south of the modern port of Safaga.[9] Various sources, furthermore, attribute a leading role in the Erythrean trade to Myos Hormos. It is significant that in the *Periplus Maris Erytraei* only two ports on the Egyptian coast are mentioned: Myos Hormos and Berenike.[10] The location of Myos Hormos was established in the last years as modern Quseir al-Qadim.[11] We have no idea about the location of Leukos Limen or its real importance. Apart from Ptolemy, no literary source mentions it. Recently it was suggested that the great geographer made a mistake, duplicating the name of a harbour on the Arabian coast (Leuke

Arabia (Cambridge MA 1983), 21; L. Casson, 'Ancient Naval Technology and the Route to India', in Begley and De Puma 1991, op. cit. (n. 2), 8–11.

[6] Ptolemy, *Geographia* 4.5.14–5.

[7] See the report of the excavations at Clysma: B. Bruyère, *Fouilles de Clysma-Qolzum (Suez), 1930–1932* (Cairo 1966). See also Sidebotham 1991, op. cit. (n. 2), 15–17.

[8] Strabo, *Geographia* 16.4.5.

[9] Sidebotham 1991, op. cit. (n. 2), 19; R.B. Jackson, *At Empire's Edge. Exploring Rome's Egyptian Frontier*. (New Haven and London 2002), 80.

[10] *Periplus Maris Erythraei* 1. Cf. Strabo, *Geographia* 2.5.12 and Plinius Maior, *Naturalis Historia* 6.103.

[11] D. Whitcomb, 'Quseir al-Qadim and the location of Myos Hormos', *Topoi* 6 (1996), 747–772; H. Cuvigny, *La route de Myos Hormos, Fouilles de l'IFAO 48/2* (Paris 2003), 24–27.

Kome), while he was writing the list of the Egyptian ports.[12] Nechesia has never been positively identified, but according to a recent theory it could be located at Marsa Nakari. The excavations at Marsa Nakari however have brought to light an imperial and Byzantine town, but not a Hellenistic one. This is incompatible with the fact that Nechesia was founded in the Ptolemaic age. So, at the moment, we must wait for new archaeological campaigns.[13] On the other hand, it is certain that ancient Berenike is modern Ras Benas.[14] It was founded by Ptolemy II, in 275 B.C., and was, especially by the mid-first century A.D., one of the two busiest and most important harbours on the Egyptian Red Sea coast.[15] For that period, we know there was a customs house at Berenike, and that taxes were levied upon the items (especially wine) travelling out of the Empire to India.[16]

The Arabian coast was under the control of the Nabatean Kingdom until the second century A.D., but its economy was strongly tied with the Roman trade. According to Ptolemy, there were two ports: Aila and Leuke Kome. The first one (modern 'Aqaba) is mentioned in some ancient sources for its involvement in the spice trade from South Arabia;[17] we get information about a trade link between Aila and the East for the first time from Eusebius of Caesarea.[18] Leuke Kome, more or less in front of Myos Hormos, was also involved in the incense trade from Arabia. The zenith of Leuke Kome was between the first century B.C. and the first century A.D., then its importance decreased constantly, especially after the unlucky Aelius Gallus' expedition.[19]

[12] Cuvigny 2003, op. cit. (n. 11), 28–30.

[13] Young 2001, op. cit. (n. 1), 44; J.A. Seeger, 'A preliminary report on the 1999 field season at Marsa Nakari', *Journal of American Research Centre in Egypt* 38 (2001), 77–88; Jackson 2002, op. cit. (n. 9), 85.

[14] S.E. Sidebotham and W. Wendrich, *Berenike '94. Preliminary Report of the Excavations at Berenike (Egyptian Red Sea Coast) and the survey of the Eastern Desert* (Leiden 1995), 5.

[15] *Periplus Maris Erythraei* 1; S.E. Sidebotham and W. Wendrich, *Berenike '95. Preliminary Report of the Excavations at Berenike (Egyptian Red Sea Coast) and the survey of the Eastern Desert* (Leiden 1996), 95; S.E. Sidebotham and W. Wendrich, *Berenike '96. Report of the Excavations at Berenike (Egyptian Red Sea Coast) and the survey of the Eastern Desert* (Leiden 1998), 119.

[16] R.S. Bagnall, C. Helms and A.M.F.W. Verhoogt, *Documents from Berenike. Volume I. Greek Ostraka from the 1996–1998 seasons* (Bruxelles 2000), 8–11; R.S. Bagnall, C. Helms and A.M.F.W. Verhoogt, *Documents from Berenike. Volume II. Texts from the 1999–2001 seasons* (Bruxelles 2005), 5–7.

[17] Strabo, *Geographia* 16.2.30; 16.4.4; Diodorus Siculus, 3.43.4; Plinius Maior, *Naturalis Historia* 5.12.

[18] Eusebius, *Onomasticon*, 6.17–21.

[19] Sidebotham 1991, op. cit. (n. 2), 21.

It should be clear that, between the first and second centuries A.D., the mainstay of the Roman harbour system on the Red Sea was Myos Hormos and Berenike. We have to take into account that in the north of the Red Sea there are continuous strong winds from north to south. These winds made it very difficult for the sailors to travel from the south to the north.[20] This can partly explain the reason why these southern ports were so successful: it was more convenient for the cargoes from India to berth at the southernmost point they could, even if consequently the cargo had to be transported by land (along the Egyptian Eastern desert) up to Alexandria, which could make prices rise too much. This disadvantage could be skipped by using the port of Coptos, on the Nile river. It was a sort of link between the two southern ports and Alexandria. The importance of this town is attested by Strabo, who calls it ἐμπόριον: there, the items from India, Arabia and Ethiopia arrived.[21] Goods coming to Myos Hormos and Berenike were carried to Coptos through caravan roads that crossed the Egyptian Eastern desert. There they were collected, registered, taxed,[22] and then sent to Alexandria via the Nile.[23]

During 2003, through a series of archaeological campaigns in the Farasan islands, fragments were found of an inscription (dated to 144 A.D.) attesting the presence of a Roman garrison (a *vexillatio* of the *Legio II Traiana Fortis*) on this island.[24] The Farasan archipelago is very far from the Roman boundaries (around 1.000 km from the Egyptian *limes*), so one should imagine that the only possible aim to keep a garrison so far (out of the Empire) was to control trade in the southern Red Sea. It might also be supposed that on this island there was some sort of small customs house (to collect taxes on the items that were imported into the Empire), although this cannot be proved. It would

[20] Strabo, *Geographia* 17.1.45. See Sidebotham 1986, op. cit. (n. 1), 51–52; De Romanis 1996, op. cit. (n. 2), 21–28.

[21] Strabo, *Geographia* 17.1.45. See also Plinius Maior, *Naturalis Historia* 5.60.

[22] D.W. Rathbone, 'Koptos the Emporion. Economy and Society, I–III A.D.', in M.-F. Boussac (ed.), *Autour de Coptos. Actes du colloque organisé au Musée des Beaux-Arts de Lyon* (Lyon 2002), 179–198.

[23] V.A. Maxfield, 'The eastern desert forts and the army in Egypt during the Principate', in D.M. Bailey (ed.), *Archaeological Research in Roman Egypt* (Ann Arbor 1996), 11–12; R.S. Bagnall and D.W. Rathbone, *Egypt from Alexander to the Copts* (London 2004), 280–284.

[24] This legion by the time of Antoninus Pius became the only one located in Egypt. See S. Daris, 'Legio II Traiana Fortis', in Y. Le Bohec (ed.), *Les Légions de Rome sous le Haut-Empire* (Paris 2000), 359–363.

seem reasonable to think that Farasan's post was linked to Berenike (maybe with its customs house).[25] To conclude, we can be sure that for more than two centuries the Red Sea southern ports were the spine of the Roman Red Sea harbour system.

There is considerable evidence that the Erythrean trade suffered a marked downturn in the later third century, and there is good reason to believe that the volume of commerce passing through the Red Sea ports declined significantly at this time. The archaeological evidence for such a decline is generally negative: there are very few finds that could be related to the later third century.[26] The intestine wars, the external pressure, and the economic crisis of the third century had a damaging effect on the Eastern long-distance trade. It has already been noted that trade was prosperous when the Empire was at peace, that is, from the later first century B.C.; consequently, it should hardly come as a surprise that internal warfare in the third century had damaged this trade. Similarly, the uncontrolled inflation which gripped the Roman world during the latter part of the third century damaged international commerce, in so far as the buying power of Roman currency collapsed.[27] In addition, the serious inflation greatly reduced the ability of citizens to purchase luxury goods.

However, the Red Sea trade gradually recovered. Possibly, this was the result of the new stability of the Roman currency, after Diocletian's and Constantine's reforms.[28] But the Roman recovery took place in a changed background. By the fourth century A.D., looking at the economic and political map of the Red Sea, one could spot several changes. First of all, the mainstay of the Roman harbour system moved to the north. The 'golden age' of Myos Hormos and Berenike came to an end. The excavations show that Myos Hormos ceased to be

[25] For a complete view of the archaeological investigation at Farasan islands, see F. Villeneuve, C. Philipps and W. Facey, 'Une inscription latine de l'archipel Farasān (sud de la mer Rouge) et son contexte archéologique et historique', *Arabia* 2 (2004), 143–190.

[26] Young 2001, op. cit. (n. 1), 82–85.

[27] See K.W. Harl, *Coinage in the Roman Economy* (Baltimore 1996), 126–136; E. Lo Cascio, 'Prezzi in oro e prezzi in unità di conto tra il III e il IV sec. d.C.', in R. Descat, *Économie antique: Prix et formation des prix dans les économies antiques* (Saint Bertrand de Comminges 1997), 161–182.

[28] See E. Lo Cascio, 'Aspetti della politica monetaria nel IV secolo', *Atti dell'Accademia Romanistica Costantiniana, X Convegno Internazionale* (Perugia 1993), 481–502; R. Rees, *Diocletian and the Tetrarchy* (Edinburgh 2004), 40–41.

used by the end of the second century,[29] while the decline of Berenike was only temporary: we have only little evidence relating to the third century, even if this harbour was clearly used again in the fourth and fifth centuries, never reaching the levels of the first and the second.[30] As we will see, the main role was now played by the northern ports: first of all Aila and Clysma, but also other smaller harbours, such as 'Abu Sha'ar and Jotabe.

'Abu Sha'ar was a fort town located very close to the coast; an inscription discovered during the excavations informs us that the fort was built around 309–311 A.D.[31] It also makes clear that 'Abu Sha'ar was part of a *limes*.[32] From this fortress, the garrisons could monitor the movements of potentially troublesome desert tribes such as the Blemmyes,[33] and patrolled the various desert routes leading to and from 'Abu Sha'ar.[34] That the fortress had a patrolling function for the trade routes is attested by the word *mercator* which appears in a fragment of another inscription.[35] An *ostrakon* dated at the sixth century shows a man who calls himself ἰνδικοπλεύστης:[36] a clear attestation that the commercial exchanges passing through 'Abu Sha'ar directed to the East were still lively during the sixth century A.D.

[29] See J.H. Johnson, 'Inscriptional Material', in D. Whitcomb and J.H. Johnson (eds.), *Quseir al-Qadim, 1980 Preliminary Report* (Malibu 1982), 265; Cuvigny 2003, op. cit. (n. 11), 201–203.

[30] See S.E. Sidebotham and W. Wendrich, *Berenike '97. Report of the Excavations at Berenike (Egyptian Red Sea Coast) and the survey of the Eastern Desert* (Leiden 1999), 443–456; S.E. Sidebotham, 'Late Roman Berenike', *Journal of American Research Centre in Egypt* 39 (2002), 217–240; Bagnall and Rathbone 2004, op. cit. (n. 23), 291–292.

[31] The text of the inscription was edited by R.S. Bagnall and J.A. Sheridan, 'Greek and Latin Documents from 'Abu Sha'ar 1990–1991', *Journal of American Research Centre in Egypt* 31 (1994), 159–160.

[32] The meaning of the word *limes* in this age has been clarified several years ago by an excellent article of B. Isaac, 'The meaning of the terms limes and limitanei', *Journal of Roman Studies* 78 (1988), 133: "the term *limes* is attested as a formal administrative concept, denoting a frontier district administered by a military commander, *dux*."

[33] It is significant that the commander Aurelius Maximinus was already known by the title of *dux Aegypti Thebaidos utrarumque Libyarum*, attested for the year 308/309 A.D. at Luxor (see *Année Épigraphique* 1934, 7; 8). This office was introduced by Diocletian to face Blemmyes' raids. See Bagnall and Sheridan 1994, op. cit. (n. 31), 161.

[34] S.E. Sidebotham, 'Preliminary Report on the 1990–91 Seasons of Fieldwork at 'Abu Sha'ar (Red Sea cost)', *Journal of American Research Centre in Egypt* 31 (1994), 133–158.

[35] Bagnall and Sheridan 1994, op. cit. (n. 31), 162–163.

[36] R.S. Bagnall and J.A. Sheridan, 'Greek and Latin Documents from 'Abu Sha'ar 1992–1993', *Bulletin of the American Society of Papyrology* 31 (1994), 112.

There is not much information from the ancient sources about Jotabe: we do not know the exact position of the island, even if it is clear that it was in the Gulf of 'Aqaba.[37] Nevertheless, we have some data that we can consider to be certain: on the island, at least between the fifth and the sixth century, there was a customs house, where taxes were levied upon the items getting from the East into to the Empire.[38] We can also suggest that the customs house of Jotabe was closely related not only with Aila, but also with Clysma.[39]

To sum up: it seems clear that by the fourth century A.D. East trade in the Red Sea was centred on two principal ports (Clysma and Aila); in addition, there was an island (Jotabe), that functioned as a customs house. To complete this system, some military forts ('Abu Sha'ar was only one link of a chain) kept the trade safe and regular.

Such a scenario is no doubt symmetric to the scenario of the first and second centuries A.D. Although the names have changed, the roles remained the same. During late antiquity, the two ports that were the mainstay of the Erythrean harbour system, Myos Hormos and Berenike, were replaced by Clysma and Aila. Linked to Berenike, there was the post at Farasan islands, from where the commercial traffic in the south of the Red Sea was controlled and where there was (maybe) a sort of customs house; this role is now played by Jotabe island. The symmetry is nearly perfect. But why did such a change happen? Usually, modern scholars have identified the third century warfare, that led to the collapse of the southern system, as the origin of this shift to the north. In fact, if we assume that the southern ports were irreparably destroyed (as will be explored below), we must infer that the Romans were forced to exploit the northern ports, which were still working.

[37] Starting by the testimony of Procopius (*Bellum Persianum* 1.19.3) that the island was no more then 1000 stades from Aila, some scholars have tried to identify the ancient Jotabe with Tirān, in the Gulf of 'Aqaba, but the archaeological investigations at Tirān brought to light no finds that could be related to a Roman occupation of the island: see B. Rothenberg and Y. Aharoni, *God's Wilderness: Discoveries in Sinai* (Toronto 1961), 162. An alternative hypothesis should locate Jotabe at Jeziret Fara'un, but also there the archaeological excavations found no Roman evidence: see Ph. Mayerson, 'The Island of Iotabê in the Byzantine Sources: A Reprise', *Bulletin of American Society for the Oriental Research* 287 (1992), 3; *Idem*, 'A note on Iotabe and several other islands in the Red Sea', *American School of Oriental Research* 298 (1995), 33–35.

[38] Malchus, 2.404–406; Theophanes, *Chronographia*, 141.15–18; Choricius Gazaeus, *Laudatio Aratii et Stephani* 65.22–23; 67.17–19.

[39] See M. Sartre, *Inscriptions grècques et latines de la Syrie*, vol. 13.1 (Paris 1982), 112–117; W. Brandes, *Finanzverwaltung in Krisenzeiten* (Frankfurt am Main 2002), 239–255.

This reconstruction, however, is not sound, for several reasons. The first objection is a methodological one. It is not correct to explain every change which occurred between the second and fourth century as a mechanical consequence of the crisis, denying any possibility that Roman initiative and talent could have worked out an efficient answer to a difficult situation. Thus, the traditional reconstruction of the change is based on the assumption that Diocletian definitely destroyed Coptos around the end of the third century.[40] Since Coptos was the main link to the Mediterranean Sea, one inclines to think that its collapse affected also Myos Hormos and Berenike.

The archaeological excavations clearly show that this scenario is not realistic. In fact, Myos Hormos had already started its decline at the end of the second century A.D. Furthermore, Berenike, after a period of crisis during the third century, came back into use, even if not in her previous role. If Coptos had actually been destroyed, it would no longer have been convenient to use a harbour such as Berenike, since it had no direct link to the Mediterranean Sea.

Recent excavations show beyond any doubt that Coptos was never destroyed by Diocletian.[41] Of course, this town suffered consequences of the tetrarchic military reactions, but it was not destroyed.[42] The eclipse of Coptos therefore, was only temporary, and it coincides with the crisis of Berenike. So, when Coptos recovered, Berenike also came back into use. We can clearly see that any hypothesis based on the destruction of Coptos is not sound, so an alternative might be suggested.

We know that in the fourth century A.D. the core of the Erythrean harbour system was in the north. This was also characteristic of the following centuries, and we cannot explain it by assuming that Coptos was destroyed. We can imagine that the temporary eclipse of the southern ports gave of course an impulse to the development of the northern ports. But maybe this development had already started earlier. If this

[40] Attested by Eutropius, *Breviarum* 9.22–23 and Hyerolamus, *Chronicon* a.266, followed by S. Williams, *Diocletian and the Roman Recovery* (London 1985), 78–88; C. Zuckerman, 'Les Campagnes des Tétrarques, 296–298. Note de cronologie', *Antiquité Tardive* 2 (1994), 68–70; Young 2001, op. cit. (n. 1), 85–86.

[41] See H. Cuvigny, 'Coptos, plaque tournante du commerce érythréen, et les routes transdésertiques', in *Coptos: L'Egypte antique aux portes du désert* (Lyon and Paris 2000), 158–175.

[42] See J.-L. Fournet, 'Coptos dans l'Antiquité tardive (fin IIIe–VIIe siècle apr. J.-C.)', in *Coptos: L'Egypte antique aux portes du désert* (Lyon and Paris 2000), 196–215.

hypothesis is correct, we have to assume that the crisis of the southern ports improved capacities already existing, but not yet used.

Clysma was connected by Trajan, through a navigable canal, to the Nile (near Babylon) and, then, to Alexandria.[43] This channel speeded up travel from the Mediterranean Sea to the Red Sea:[44] nevertheless, it did not help the town to increase its prosperity before the fourth century, when we have clear attestations of the leading role of Clysma in the area. Unfortunately, the archaeological investigations of the site yielded inconclusive results.[45] Instead, the documentary and literary evidence give a coherent picture. As we have just seen, the papyri show us that the canal functioned until the Arab age,[46] while the literary sources tell about the wealth of the town and its role as a great port of trade, to which ships from India came.[47]

[43] Ptolemy, *Geographia* 4.5. Trajan was not the first ruler who tried to connect the Red Sea and the Nile. We know that the pharaoh Necus, the Persian king Darius I and Ptolemy II also tried to build the channel, as attested by Herodotus, 2.158 and Diodorus Siculus, 1.33.8–12. On the argument, see A. Calderini, 'Ricerche sul regime delle acque nell'Egitto greco-romano', *Aegyptus* 1 (1920), 37–62; C. Bourdon, *Anciens canaux, anciens sites et ports de Suez* (Cairo 1925); P.J. Sijpesteijn, 'Der ΠΟΤΑΜΟΣ ΤΡΑΙΑΝΟΣ', *Aegyptus* 43 (1963), 70–83; De Romanis 1996, op. cit. (n. 2), 71–95; J.-J. Aubert, 'Aux origines du canal de Suez? Le canal du Nil à la mer Rouge revisité', in M. Clavel-Lévèque and H. Hermon, *Espaces intégrés et ressources naturelles dans l'Empire Romain* (Paris 2004), 219–252.

[44] The canal was used until the Arab conquest and also after, as the papyrological evidence attests: 112 A.D.: *SB* 6.9545; 208 A.D.: *P.Oxy.* 60 (1994), 4070; 221 A.D.: *P.Bub.* 4.1; 297 A.D.: *SB* 5.7676 (= *P.Cair.Isid.*, 81); end third/beginning fourth century: *P.Oxy.* 55 (1988), 3814; 332 A.D.: *P.Oxy.* 12 (1916), 1426; 358/359 A.D.: *SB* 5.7756 (= *P.Lond.Inv.*, 2574); 420/421 A.D.: *PSI* 689; 423 A.D.: *PSI* 87; between fifth and sixth century: *P.Wash.* 1.7. After the Arab conquest, we find *P.Lond.* 1326 (710 A.D.) e *P.Lond.* 1465 (between 709 and 714).

[45] For the report see Bruyère 1966, op. cit. (n. 7). For a critical view, see Ph. Mayerson, 'The Port of Clysma (Suez) in transition from Roman to Arab rule', *Journal of Near Eastern Studies* 55 (1996), 119–126.

[46] See the documents already quoted above. Despite these texts, some scholars have suggested that Trajan's channel was never used as a commercial link. See Mayerson 1996, op. cit. (n. 45), 121: "whether the canal was navigable at that time is unknown and whether the cleaning was designed to irrigate new lands along its route is equally unknown." This opinion seems to be too pessimistic. Cf. Aubert 2004, op. cit. (n. 43), 247, who suggests that the canal was used only in some periods during the year as a commercial link, and this hypothesis could explain the irregularity of the testimonies coming from the papyri.

[47] Lucianus, *Alexander Pseudomantis* 44.16–18; *Itinerarium Egeriae* 6.4–7.9; Philostorgius, *Historia Ecclesiastica*, 35. The most interesting is of course Petrus Diaconus, *Liber de locis sanctis* CCSL, vol. 175, 101.

The development of Aila started under Diocletian, who transferred the *Legio X Fretensis* there from Jerusalem.[48] Recent archaeological investigations show that its prosperity grew during late antiquity, until the Arab conquest.[49] The most interesting information coming out of the excavations is the close connection between Aila and the Axumite port of Adulis,[50] an argument that will be dealt with below. Like Clysma, Aila is also remembered by the literary sources as an important port of trade with East in late antiquity.[51] So, the question is: why did the Romans prefer to use the northern ports after the third century? One may argue that, at the outset, this course was triggered by the eclipse of the southern ports. But even when Coptos and Berenike came back into use their role had become a secondary one. Something changed, which made it more convenient to continue to use the northern ports.

As we have already seen, the volume of commerce passing through the Red Sea ports declined significantly during the third century. In that period, the Romans lost their role in controlling trade with the East. It is not a coincidence that, when queen Zenobia of Palmyra became independent from Rome, she annexed Egypt and Arabia to her kingdom, to better control the Eastern trade. After Zenobia's fall, the lack of control in the Eastern provinces was more evident.

In such a critical period, some peoples greatly increased their own role in the East trade at Rome's expense: Sassanians, Arab Hymiarites, and Ethiopic Aksumites. Particularly the latter were able to integrate themselves into the Roman economic system.[52] The powerful Aksumite kingdom sent ships to India and collected Eastern items at Adulis, the main port (and capital city) of the kingdom. The ancient sources tell us that Roman traders went there to buy Indian items. Thus, Roman

[48] Eusebius, *Onomasticon* 6.17–21.

[49] For the reports, see S.T. Parker, 'The Roman 'Aqaba Project: the 1994 Campaign', *Annual of the Department of Antiquity of Jordan* 40 (1996), 231–257; *Idem*, 'The Roman 'Aqaba Project: the 1996 Campaign', *Annual of the Department of Antiquity of Jordan* 42 (1998), 375–394; *Idem*, 'The Roman 'Aqaba Project: the 1998 Campaign', *Annual of the Department of Antiquity of Jordan* 44 (2000), 373–394; *Idem*, 'The Roman 'Aqaba Project: the 2000 Campaign', *Annual of the Department of Antiquity of Jordan* 46 (2002), 409–428; *Idem*, 'The Roman 'Aqaba Project: the 2002 Campaign', *Annual of the Department of Antiquity of Jordan* 47 (2003), 321–333.

[50] Also attested by Cosmas Indicopleustes, *Topographia Christiana* 2.54.

[51] Procopius, *Bellum Persianum* 1.19; Antoninus Placentius, CCSL vol. 149, 175.

[52] One should note the Aksumite coins are a close imitation of the Roman ones. See L. Pedroni, 'Una collezione di monete aksumite', *Bollettino di Numismatica* 28 (1997), 7–147.

needs were partly satisfied by Aksum. It was now not convenient to use any southern port (like Berenike) to travel to Adulis: this option forced to a long trip along the Eastern desert. From the harbours of Aila or Clysma, travel by sea was definitely cheaper, even if it was necessary to sail against the winds that blew in the north. It is worth remembering that some scholars have noticed that, in late antiquity, there is a remarkable ignorance about the geography of India.[53] This phenomenon could be explained, among others reasons, by assuming that there was only very limited direct travel of Roman sailors to India.

On these last points, an objection could be raised. As seen, sailing from south to north in the Red Sea was very difficult for Roman ships, equipped with their square sail. How could this problem be resolved? No doubt, the best solution was to use a lateen sail that could allow ships sail close to the wind. Unfortunately, our information about the age in which this kind of sail was introduced is inadequate. Nevertheless, we can at least confirm that the Romans, probably by the second century A.D., improved on a manœuvre (already known, but not often used) which allowed a square sail to be turned into a sort of rough lateen sail when necessary. This arrangement made sailing in the north of the Red Sea simpler and, consequently, more convenient.[54] To conclude, it seems that the 'new system', emerging after the third century crisis, was efficient, like the previous one: in the late Empire Romans imported many goods from the East, maybe also to a greater extent than in the early Empire.[55]

It is, therefore, important to underline once more that the reorganization of the whole area in late antiquity was not simply a consequence of crisis, or of a period of decline. We saw that this change might already have started by the end of the second century A.D. (the period when Myos Hormos started declining), and we may assume that the troubles of the third century merely accelerated a development that was already on its way. At the same time, it is clear that such a new arrangement

[53] Ph. Mayerson, 'A Confusion of Indias: Asian India and African India in the Byzantine Sources', *Journal of the American Oriental Society* 113 (1993), 169–174.

[54] The discussion about the introduction of the lateen sail is very rich. The most interesting work is still L. Casson, *Ships and Seamanship in the Ancient World* (Princeton 1971). See also L. Basch, 'L'apparition de la voile latine en Méditerranée', in D. Meeks and D. Garcia, *Techniques et économie antiques et médiévales: le temps de l'innovation* (Paris 1997), 214–223.

[55] J.-P. Callu, 'I commerci oltre i confini dell'Impero', in A. Carandini, L. Cracco Ruggini and A. Giardina (eds.), *Storia di Roma 3/1* (Torino 1993), 487–524.

in the area was not only forced by negative circumstances, but was also the result of the talent for organisation, the spirit of adaptability and the technological progress, displayed by late Roman government and traders towards the changed general conditions.

Naples, September 2006

DEMISE AND FALL OF THE AUGUSTAN MONETARY SYSTEM

KOENRAAD VERBOVEN

According to the jurist Paulus, coinage originated from the need for a common medium of exchange. To fill this need a *materia* was chosen of which the enduring value was generally recognized (*publica ac perpetua aestimatio*). This *materia* was stamped by a public design (*forma publica*), to be used not so much *ex substantia (...) quam ex quantitate*.[1] Monetary value was created by the *forma publica* and was by definition a legal construct, creating the enforceable obligation to accept coins 'bearing the imperial portrait'. Although coinage required a valuable substance as bearer, the *forma publica* was not intended to guarantee the commodity value of this substance.[2]

The ambivalence of coinage as currency combining intrinsic and nominal value continues to set the terms of the debate today. Money in the ancient world is still seen primarily as coined metal: *materia* subjected to legal norms regarding weight, size, purity, form, design, production and use. The debate still revolves around the question how important the contribution of coins' metal value was to uphold purchasing power and face value.

The distinction between 'money' and 'currency' is mostly limited to the role of cheques and bank money. The difference, however, is more fundamental and crucial to a proper understanding of how money and currency functioned. The essence of money is the social institutionalisation of its primary tokens (whether coins, cowrie shells, bullion, bank notes or anything else). 'Money' exists *qua* money only

[1] E. Lo Cascio, 'How did the Romans view their money and its function?' in C.E. King and D.G. Wigg (eds.), *Coin finds and coin use in the Roman world (13th Oxford Symposium on coinage and monetary history, 1993)* (Berlin 1996), 273–287; C. Nicolet, 'Pline, Paul et la théorie de la monnaie', *Athenaeum* 72 (1984) 105–135; R. Wolters, *Nummi Signati. Untersuchungen zur römischen Münzprägung und Geldwirtschaft* (München 1999), 350–362.

[2] *Sententiae Pauli* 5.25.1; cf. Arrianus, *Epictetus* 3.3.3; K. Verboven, 'The Monetary Enactments of M. Marius Gratidianus' in C. Deroux (ed.), *Studies in Latin Literature and Roman History. Vol. VII* (Bruxelles 1994), 117–131; Lo Cascio 1996, op. cit. (n. 1), 278.