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THE COASTAL ARABIA AND THE ADJACENT SEA-BASINS IN THE *PERIPLUS OF THE ERYTHRAEAN SEA* (TRADE, GEOGRAPHY AND NAVIGATION)

Very little can be said for sure about the author of the *Periplus of the Erythraean Sea*. It is only more or less certain that he has composed this text between 40 and 70 of the 1st century AD¹. One may only guess if his author was a sea-trader or ship-owner, cartographer or someone else by occupation. However, the nature of this source – unique by the richness of the information it gives on the history of ancient Erythraean Sea (modern Red Sea, Arabian Sea and Bay of Bengal) – and even the personality of its author could be probably better understood, if one completes information of the *Periplus* with that of the earlier and contemporary Classical sources on the geography and ethnography of the same regions. The coincidences and disagreements between them could not only advance the analysis of the sources themselves, but also drop some more light on the personality of the author of the *Periplus*. One may not even say for sure where he himself lived and worked, though the enumeration of the ports on the Erythraean Sea begins with Myos Hormos, twice Berenice is used as a reference point (18. 6. 22 ; 19. 6. 26). The most important layer of information of the *Periplus* concerns the trade routes in the basin of the Erythraean Sea, the commodities traded in the ports, and the names : of places, ethnic and personal ones.

I. Trade routes in the *Periplus*

I.1. The *Periplus* and the pre-Hellenistic Sea-Contacts between South Arabia and Persian Gulf

The trade connections of South Arabia with adjacent regions were thoroughly analyzed in many publications, their peculiarities seem to have been fully disclosed

1. See the discussion in BUKHARIN 2007a, p. 201–247.

and described in details². One of the trade ways – between Frankincense-bearing regions in South Arabia and Persian Gulf – seems to deserve more attention. The *Periplus* describes the sailing through the modern Persian Gulf to the port of Ommana :

ὁ Περσικὸς κόλπος [...], καθ' ὃν ἐν τοῖς ἐσχάτοις αὐτοῦ μέρεσιν ἐμπόριον ἔστι νόμιμον, λεγόμενον ἢ Ἀπολόγου, κειμένη κατὰ Πασίνου Χάρακα καὶ ποταμὸν Εὐφράτην. Παραπλεύσαντι δὲ τοῦτο τὸ στόμα τοῦ κόλπου μετὰ δρόμους ἕξ ἕτερον ἐμπόριον ἔστιν τῆς Περσίδος, ἢ λεγομένη Ὀμμανα. [...] εἰς δὲ τὴν Ὀμμανα καὶ ἀπὸ Κανῆ λίβανος καὶ ἀπὸ Ὀμάνων εἰς τὴν Ἀραβίαν ἐντόπια ῥαπτὰ πλοιάρια, τὰ λεγόμενα μαδάρατε³.

The description of the Persian Gulf is not very detailed in the *Periplus*. It gives no list of the goods traded on the markets inside the Gulf. It does not mention Gerrha – the most known market in this region⁴.

The connections between frankincense-producing regions of South Arabia and Persian Gulf seem to have quite deep history. Herodotus reports of the payment of taxes and donations in incenses to the Persian king Artaxerxes :

Ἀράβιοι δὲ χίλια τάλαντα ἀγίνεον λιβανωτοῦ ἀνὰ πᾶν ἔτος. Ταῦτα μὲν οὗτοι δῶρα πάρεξ τοῦ φόρου βασιλεῖ ἐκόμιζον⁵.

The inhabitants of the city of *Carra*, i.e. those of Gerrha⁶, are to be seen in those « Arabs » of Herodotus. This follows from the *Naturalis Historia* of Pliny the Elder, who explicitly confirms this information of Herodotus :

2. CUVIGNY 2010, p. 420-425 ; SEDOV, SALLES 2010, p. 453-467.

3. « [...] the Persian Gulf, a vast expanse, spreads up to places deep within it. At its very head is a legally limited port of trade, called Apologos, lying near Charax Spasinu and the Euphrates River. After sailing by the mouth of the gulf, six runs further on you come to another port of trade of Persis called Omana [...] Omana also takes in frankincense from Kanè, and sends out to Arabia its local sewn boats, the kind called *madarate* » (35. 11. 31 – 36: 12. 3-9) – translation from CASSON 1989, p. 71, 73. The Greek μαδάρατε can go back to the Arab. *mudawwara* (« round ») ; so this word is rather to be read as μαδάρα τε.

4. About the identification of Gerrha with al-'Uqayr, see : BUKHARIN 2007b, p. 80-85.

5. The Arabians rendered a thousand talents' weight of frankincense yearly. Such were the gifts of these peoples to the king, besides the tribute (III. 97. 5) – translation from GODLEY 1921, p. 127.

6. In this connection one must not forget about the foundation of Gerrha in early 7th century BC (see for more details POTTS 1983, p. 90-94).

*mihi ad Persas etiam prius ista portasse quam in Syriam aut Aegyptum videntur Herodoto teste, qui tradit singula milia talentum annua turis pensitasse Arabas regibus Persarum*⁷.

So, the « Arabs »⁸ who were making those gifts to the Persian king are not to be connected with the North-West Arabia⁹. Though Arabia as Achaemenid province is to be localized in the Southern part of the Eastern Mediterranean – North-West Arabia¹⁰ (this follows from the order of the provinces in the Behistūn inscription and the place of Arabia after Assyria and before Egypt), this fact does not presume any direct connection of the information by Herodotus in III. 97 to the location of the Persian satrapies.

Some place-names on the Ptolemy's map of Arabia Felix point to the association of the North-East of the Arabian Peninsula to the Arab tribes and in particular to the land of 'Umān¹¹. The location of Ὀμμανα ἐμπόριον in the extreme North-East of Arabia can be confirmed by the information of Pliny the Elder. According to Pliny, the territory of *Omani* stretches from the extreme North-West Arabia (Petra) to the extreme North-East Arabia (Characene)¹², while the city of *Omane* was « by mistake » localized by the « previous writers » in Carmania¹³. The connection of the ethnic name 'umān to the South Mesopotamia

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7. « But my own view is that they used to convey those commodities to the Persians even before they took them to Syria or Egypt, this being attested by Herodotus, who records that the Arabs used regularly to pay a yearly tribute of a thousand talents of incense to the kings of the Persians » (XII. XL/80) – translation from RACKHAM 1960, p. 59, 61.
 8. Cf. the designation of the Western shore of the Persian Gulf as « Arabia » in the *Periplus* (36 : 12. 8).
 9. Cf. : « ...such amount of incense the Arabs could pay only if they controlled the transit trade between Ḥaḍramawt and the 'Aqaba bay » (DANDAMAEV, LUKONIN 1980, p. 191).
 10. Localization of « Arabia » between Nile and Red Sea (as in DANDAMAEV, LUKONIN 1980, p. 191) reduces the size of a satrapy to the dimensions of the smallest *appanage*.
 11. See also Κορομανίς πόλις from the Aram. *ḥrm* – (Ptol. 118 ; VI. 7. 19). It is also possible that the name of *portus Mochorbae* (Plin. *NH*. VI. XXXII/149) also goes back to *mkrb*. The location of a *mikrāb* at that place could give the name of the « prohibited » one to entire region. Ὀμανον ἐμπόριον (235 in VI. 7. 36) was located by Ptolemy in the South-West Arabia, which is as in some other cases an obvious mistake. It rather corresponds to the territory of modern Kuwait.
 12. ...*a Petra incoluere Omani ad Characeni* [From Petra to Characena live the *Omani* (*NH*. VI. XXXII/145)].
 13. ... *oppidi Omanorum Batrasavaves et Omanae, quod priores celebrem portum Carmaniae fecere* [« ... Batrasave, the town of the Omani, and the town of Omana,

is also seen from the information of Lucian about the king Charax – ruler of the incense-bearing country Oman :

Χαρακηνός...Ὀμάνων τῆς ἀρωματοφόρου βασιλεύσας (Macrob. 17).

Only the location of the Ὀμμανα ἐμπόριον on the territory of modern Kuwait permits to interpret in a clear way the information of the *Periplus* about Ὀμμανα. As *Periplus* reports (quotation above), one needs to make six marches from the mouth of the Persian Gulf in an unsaid direction in order to reach the port of Ὀμμανα. Though the meaning of the verb παραπλέω « to sail through »¹⁴ is quite unusual (one could expect εἰσπλέω), the correct search for the port Ὀμμανα is only possible while sailing along the East-Arabian coast in the Persian Gulf towards the modern Kuwait. This is confirmed by the fact that the port Ὀμμανα is called the destination-point of this sailing with the port Ἀπολόγου¹⁵. Though the port Ὀμμανα was quite clearly separated in the *Periplus* from « Arabia » – the navigation between Ὀμανον and « Arabia » is carried out on the boats-μαδαράτε¹⁶ (36: 12. 8-9), this can be explained by the location of Ὀμανον ἐμπόριον in the territory of Persia, though geographically still in *Arabia Felix*.

In this very way the legend ΒΑΣΙΛΕΥΣ OMAN on the coin of the king of Characene Meredates (mid 2nd century BC)¹⁷ tells not about the spread of Meredates' power on the territory of modern 'Umān¹⁸, but about the location of the ancient 'Umān in Characene.

which previous writers have made out to be a famous port of Carmania... » (VI. XXXII/149) – translation from RACKHAM 1961, p. 451].

14. As in BEESTON 1981, p. 357.

15. Ἐξαρτίζεται δὲ εἰς αὐτὴν συνήθως ἀπὸ μὲν Βαρυγάζων εἰς ἀμφοτέρωτα ταῦτα τῆς Περσίδος ἐμπόρια πλοῖα μεγάλα [...] [« Customarily the merchants from Barygaza deal with it, sending out big vessels to both of Persis' ports of trade [...] » (36: 12. 4-6) – translation from CASSON 1989, p. 73].

16. See also note 3.

17. See publication in POTTS 1996, p. 279 (Fig. 12).

18. As in POTTS 1996, p. 280. The fragment of the Glaukus' work does not say however that the ancient port Omana would have lain on the territory of modern 'Umān : Ὀμανα, πόλις τῆς εὐδαίμονος Ἀραβίας, Γλαῦκος δευτέρω Ἀρ. ἀρχ. Τὸ ἔθνικόν Ὀμανεύς. Εὐαληνοὶ, ἔθνος περὶ οὗ φησὶ Γλαῦκος ἐν δευτέρω Περὶ Ἀραβίας (Glaucos. Arab. Arch. II = Herodanus. *De prosodia catholica*. 3. 1. 383) ». Even if the ethnic name Εὐαληνοὶ corresponds to ancient Dilmun (Bahrain), this does not point to the location of the Εὐαληνοὶ near Bahrain : before Ὀμανεύς Glaukos enumerates peoples from Western Arabia ; the name Εὐαληνοὶ could be compared with Ubullu, which would testify to the location of the Εὐαληνοὶ on the territory of modern 'Irāq.

The inscription of Ashurbanipal from the temple of Ishtar in Nineveh, the so-called « Stele of Ishtar » (about 640 BC), gives an account of the payment of the tribute by the people of the city of Iskê from the land of Qadê to the Assyrian king. Iskê corresponds to modern Izki (Ziki), Qadê to the territory of modern 'Umân¹⁹. The people of Qadê must have paid to Ashurbanipal in the same way as the « Arabs » in the report of Herodotus (III. 97. 5), who besides ordinary tribute were sending donations in incense to Artaxerxes I.

Possibly, the tribute paid to Artaxerxes I was continuation of those disbursements, which were paid by Qadê with capital in Iskê to Ashurbanipal through the mediation of the « Arabs » from Pliny's *Carra* – traders of Gerrha. Since the only possible source of the incense for the such payments could be modern Dufâr, one needs to suppose that the Dufârî incense was first brought to Qadê (modern 'Umân) and then along the coast of the modern Persian Gulf had to be delivered to the Assyrian and then to the Persian court.

These tributes were surely not sent from Qana', which was not yet established. However, the sea-contacts between Ḥaḍramawt and Southern Mesopotamia seem to have had a much deeper history that one used to think.

I. 2. Trade in South Arabian and East African species

The importance of South Arabia and East Africa for Mediterranean world in Antiquity is normally connected with supplies in species and aromatics. Some names are known from ASA inscriptions : 'fz[h], bhr, bšm, dby, dnb, drw, hdk, hrmt, n'm, qblt, qlm, qryt, rnd, šrf, tnf/tyb, tyb, tyb'l²⁰. This list can be completed with some Greek and Latin names, mostly related to East Africa. We have no local ancient sources, which would contain the names of species and aromatics. That is why information of such sources as *Periplus of the Erythraean Sea* is so important for the reconstruction of the articles of the sea-trade between East Africa, South Arabia and Mediterranean.

The author of the *Periplus* reports in this respect :

Ἐκφέρεται δὲ ἀπὸ τῶν τόπων τούτων καὶ σμύρνα καὶ λίβανος ὁ περατικὸς ὀλίγος καὶ κασ[σ]ία σκληροτέρα καὶ δουακα καὶ κάγκαμον καὶ μάκειρ, τὰ εἰς Ἀραβίαν προχωροῦντα, καὶ σώματα σπανίως²¹.

19. POTTS 1985, p. 82.

20. For interpretation of the ASA names see BEESTON 1951, p. 131-132 ; RYCKMANS 1951, p. 372 ; FRISK 1960, p. 159 ; JAMME 1962, p. 137 ; VON WISSMANN 1964, p. 397 ; MILLER 1969, p. 65-67 ; MÜLLER 1974, p. 56-59 ; MÜLLER 1976, p. 127 ; MÜLLER 1978a, p. 442 ; BIELLA 1982, p. 276, 433, 469 ; BRON 1986, p. 132-134 ; MÜLLER 1988, p. 633, n. 2a ; BANTI, CONTINI 1997, p. 172-173 ; MÜLLER 1997, p. 193-209 ; ROBIN 1997, p. 43, n. 26 ; CAPPERS 1999, p. 60-62 ; SIMA 2000, p. 266-279.

21. « Exports from this area are : myrrh, a little 'far-side' incense, a rather harsh cassia, duaka, kankamon, makeir, which items are exported to Arabia ; on rare occasions

One needs to remember that the Classical geographers and the author of the *Periplus* as well never refer to the southwest of the Arabian Peninsula as « Arabia ». Instead, they speak of *Arabia Felix*, the Kingdom of the Sabeans, Saba' or Omiritia²². The *Periplus* calls this region Mafaritis and reports it has been ruled by the king of two peoples, namely, the Sabeans and the Homerites (23: 7. 28-29). By contrast, the coast from Leuke Kome (20: 7. 3) to Mafaritis (22: 7. 25), which included the port Muza, is designated by the *Periplus* as « Arabian ». Thus, in the *Periplus*, « Arabia » means the territory of southern Ḥijāz and 'Athīr. As follows from the *Periplus*, the Arabs from Muza maintained the trade connections with Nabataea (19: 6. 28-31) along this coast²³. So, the *Periplus* describes one more trade-route – from East Africa through South Arabian ports Okelis and Muza to Nabataea. The following species and aromatics were delivered by this branch of the « Incense Road » among others :

- σμύρνα

The Greek σμύρνα goes back to **murr* (« bitter »)²⁴. This is *Commiphora myrrha* (Nees) Engl. – an aromatic resin, which comes out of the bark of the bush *Commiphora* and dries out into yellow, red or brown bundles. Myrrh and myrrh oil were used in the medicine and perfumery, in the cults and burials.

Myrrh grows in Northwest of modern Somalia from Zeila (Ἀυαλίτης in the *Periplus*) till Heis²⁵, in the Tihāma²⁶, in Ḍufār²⁷ from Mukallā to Wādī Ḥadramawt, in Haḡar to the east of Bi'r 'Alī ; in Antiquity myrrh also grew in Qatabān²⁸ and, as the *Periplus* reports, in Western India (49. 16: 29).

Myrrh from Somalia was considered to be the best²⁹. Then followed myrrh from Gedrosia, which was delivered to the Mediterranean by the Phoenicians, and

slaves » (8: 3. 29-32) – translation from CASSON 1989, p. 55.

22. Theophr. IX. 4. 2 ; Agath. *De mari*. 99-100 ; Strabo. XVI. 4. 19 ; Diod. Sic. III. 47. 6 ; Plin. *NH*. XII. XXXII/62.
23. See for the description of Nabataea in the *Periplus*, BUKHARIN 2012 (in press).
24. Vgl. also akk. *murru* (MORAN 1987, nr. 25, 269) ; ug. ph. *mr* ; hebr. *mōr* ; aram. *mūrā* ; arab. *murr* – « bitter », « to be bitter » (BANTI, CONTINI 1997, p. 178 ; MÜLLER 1997, p. 197-198).
25. Possibly to be identified with Mundu, mentioned in the *Periplus* (9: 4. 1) (SCHOFF 1912, p. 81 ; WARMINGTON 1928, p. 53).
26. KÖNIG 1987, p. 70 ; DUBAIE, AL-KHULAIIDI 1993, p. 261.
27. Now *Commiphora habessinica* designates a plant, different from true myrrh (MILLER, MORRIS 1988, p. 306).
28. VAN BEEK 1958b, p. 143-144 ; GROOM 1981, p. 99.
29. *Trogodytica silvestrium prima* (Plin. XII. XXXV/69) ; σμύρνα ... πρωτεύει δὲ ἡ Τρωγλοδυτική (Diosc. I. 64. 1).

which, as Aristobulos wrote, surpassed all the similar trees in sizes (Arr. *Anab.* 6. 22. 4).

- κασσία

Some historians of ancient sea-trade have developed the theory of the South Asian origin of cassia and its delivery to Mediterranean³⁰. According to this opinion, Indian and Arabian traders delivered South Asian species to the markets in Arabia and East Africa. This kind of commerce was hidden from the Roman traders, so the latter could not come to know the real homeland of cassia. They erroneously thought it grew and came from Somalia and Arabia.

This view was reproduced even by the editor of *Periplus* L. Casson (though he has not mentioned his predecessors, e.g. E.H. Warmington), who following Strabo³¹ and Flavius Philostratus (Apoll. III. 4) calls India homeland of cassia. Casson thought these plants could not grow in Arabia, Ethiopia or Somalia due to the extreme heat, while cassia itself reached India from China and South-East Asia³².

This theory was criticized by M.G. Raschke, who thought it be charming and attracting but having no foundation. Raschke himself considered East Africa as homeland of cassia³³.

S. Amigues referred to the *Historia plantarum* of Theophrastus³⁴, who in her opinion mentioned Indian origin of cassia. The fragment in question, however, seems to have not mentioned this at all : it says that cassia as well as *cinnamon*,

30. BERENDES 1902, p. 36-37, 39 ; SCHOFF 1912, p. 82-84 ; WARMINGTON 1928, p. 186-189, 192-193 ; see also SIMA 2000, p. 277, 279.

31. [...] κασίαν δὲ [...] τινὲς δὲ τὴν πλείω ἐξ Ἰνδῶν εἶναι [« ...some say that cassia comes from India » (XVI. 4. 25)].

32. CASSON 1984, p. 225-246 ; CASSON 1989, p. 123. The view of South Asian or Southeast Asian origin of cassia was also expressed in the following earlier works : SIGISMUND 1884, p. 30-32 ; PARTSCH 1916, p. 36-37 ; THIEL 1966, p. 12 (see also the 1st edition : THIEL 1939, p. 198) ; MILLER 1969, p. 42-47, 153-172 (cinnamon and cassia were transported to the East Africa by the inhabitants of Indonesia ; see against : DATOO 1970, p. 75) ; PIRENNE 1970, p. 103 ; SIDEBOTHAM 1986b, p. 15 ; SALLES 1996, p. 255 ; AMIGUES 1996, p. 662-663 ; GOYON 1996, p. 651-655 ; DE ROMANIS 1996, p. 33, 43, 97, 109 ; DE ROMANIS 1997, p. 662-670).

One might mention one more etymology of cassia – Austronesian : *kasay (« rubbing ») ; cf Bisay kasay (bark of a tree, used for foaming), Anc.-Jav. kasay (means for hair-washing), ngaju kasay (« rubbing ») (KULLANDA 1992, p. 54).

33. RASCHKE 1975, p. 244 ; RASCHKE 1978, p. 652-656.

34. [...] τὰ δὲ ἄλλα πάντα τὰ εὖοσμα οἷς πρὸς τὰ ἀρώματα χρῶνται, τὰ μὲν ἐξ Ἰνδῶν κομίζεται κάκειθεν ἐπὶ θάλατταν καταπέμπεται, τὰ δ' ἐξ Ἀραβίας, οἷον πρὸς τῶ κινναμῶμω καὶ τῇ κασίᾳ καὶ κώμακον « [...] As to all the other fragrant plants used for aromatic odours, they come partly from India whence they are sent over sea, and partly from Arabia, for instance, komakon – as well as cinnamon and cassia » (IX. 7. 2) – translation from HORT 1916, p. 249].

komakon and other fragrant plants was exported from Arabia. The word κἀκεῖθεν refers to Syria, since this passage deals with the Syrian plants. Theophrastus tells in the *Historia plantarum* of the South Arabian origin of cassia³⁵. Agatharchides of Cnidus (*De mari*. § 97) also mentioned cassia among the plants of Tihāma (coastal line in modern Yemen and Saudi Arabia along the Red Sea).

The author of the *Periplus* (8: 3. 30-31) reports (see quotation above) of the export of *rather harsh* (σκληροτέρα) cassia from Malao³⁶. Here it was evidently opposed to another, possibly softer, sort of cassia of unknown origin. It is possible that cassia from modern Somalia grew quite harsh due to the heat.

Modern botanical investigations do confirm that cassia grows in South Arabia³⁷. There are four sorts of the family *Cassia* only in Ḍufār : *Cassia holosericea*, *Cassia italica*, *Cassia tora*, *Cassia obtusifolia*³⁸, four sorts of cassia grow also in Tihāma : *Cassia italica* (Mill.) Lam. Ex Steud., *Cassia nigricans* Vahl., *Cassia occidentalis* L., *Cassia senna* L.³⁹.

There are several plants in Ethiopia, whose local names could give κασσία in Ancient Greek : *dāma käs^ye*, *dama käs^ye*, *kās^ye*. The following identifications have been proposed : *Ocimum urticifolium* Roth. ; *O. gratissimum* L. ; *O. lamifolium* Hochst. ex Benth. ; *Lippia abyssinica* (O. et D.) ; *L. javanica* (Burm f.) Sprengel ; *O. menthaefolium* Hochst. ; *O. lamifolium* Piov Lemordant. The *dāma käs^ye* was garden fragrant aromatics and was used for the treatment of the headache and a cold ; *kās^ye* was known, due to its pleasant odor and its leaves were used for the purification of the oil⁴⁰. The name *kās^ye* seems to go back to Ge'ez *k^wasaya* – « separate », « divide » ; cf. hebr. *kāsas* – « cut off brushwood »⁴¹.

The Ethiopian etymology of the Greek κασσία seems to be also reflected in the archaic name of a fragrant resin of « southern » origin, known in Egypt already in the period of Ancient Kingdom. This name was used in the sacral medical texts, whose

35. Γίνεται μὲν οὖν ὁ λίβανος καὶ ἡ σμύρνα καὶ ἡ κασία καὶ ἔτι τὸ κινάμωμον ἐν τῇ τῶν Ἀράβων Χερρονήσῳ περὶ τε Σαβά καὶ Ἀδραμύτα καὶ Κιτίβαινα καὶ Μαμάλι [« Now frankincense, myrrh, cassia and also cinnamon are found in the Arabian Peninsula about Saba, Hadramyta, Kitibaina and Mamali » (9. 4. 2) – translation from HORT 1916, p. 234-235].

36. Modern Berbera (SCHOFF 1912, p. 79 ; WARMINGTON 1928, p. 53 ; HUNTINGFORD 1980 p. 90 ; CASSON 1989, p. 120).

37. Already E. Glaser had no doubt that modern Somalia and South Arabia were the homeland of cassia. He derived the Greek name from Arab. *kādī* (GLASER 1890, p. 41).

38. MILLER, MORRIS 1988, p. 162.

39. DUBAIE, AL-KHULAIIDI 1993, p. 263.

40. STRELCYN 1973, p. 158 (n° 67).

41. LESLAU 1991, p. 296-297.

lexica was not peculiar to the spoken language of the 8th-7th centuries AD, where it could be borrowed into the Greek from : $lys^3yt/lys^3yt/ly^3syt < šs^3t$ ⁴². The Ethiopian word for cassia was borrowed into Hebrew (*qasyôl*) and from there into Greek.

The view of the South Asian origin of cassia is contradictory with the results of these investigations and the data of the *Periplus*, which point to the East African homeland of cassia. It is possible that South Arabian cassia differed from that of East Africa, as one might suppose from definition of the latter as « rather harsh ». This peculiarity could be regarded as advantage, absent in the South Arabian cassia.

- δουακα

This product is mentioned only in the *Periplus* (8: 3. 31). The word is driven back either to Sanskrit *darka/darkar* (« bark »)⁴³ or to arab. *dūka*⁴⁴. According to R. Cappers δουακα was *Cinnamomum species* or *Commiphora playfairii* (Hook. f.) Engl.⁴⁵ From the phonetic point of view δουακα could be compared with the names of Ethiopian plants *d^wog*⁴⁶ and *d^woqma*⁴⁷.

- μάκειρ

Homeland of this product is normally searched for in India, though there is no botanic identification⁴⁸. L. Casson remarks : «...like cassia, makeir was an Asian product, that traders from the West purchased in Africa »⁴⁹. This seems to confirm the sentence of Pliny the Elder⁵⁰. From the other hand, there is an

42. GOYON 1996, p. 652.

43. Any Sanskrit word for *darka*, referred to by Casson (1984, p. 229), is not fixed in the reliable dictionaries.

44. E. Glaser (GLASER 1890, p. 197) thought this was a designation for a kind of species, growing in Somalia. In this connection Glaser put forward a reading δουκα.

45. CAPPERS 1999, p. 61.

46. *Ferula communis* L.; *Fluor. abyssinica* Hochst. It is used for kindling [STRELCYN 1973, p. 160 (No. 73)]

47. *Syzygium guineense* (Willd.) ; *Calyptanthes guineensis* Willd.]. The fruits are used as meals [STRELCYN 1973, p. 161 (No. 74)].

48. SCHOFF 1912, p. 81 ; WARMINGTON 1928, p. 216 ; MILLER 1969, p. 60 ; CASSON 1989, p. 126 ; KARTTUNEN 1997, p. 156-157 ; CAPPERS 1999, p. 61.

49. CASSON 1989, p. 126.

50. *Et macir ex India advehitur, cortex rubens radice magnae, nomine arboris suae. qualis sit ea incomperum habeo. corticis melle decocti usus in medicina ad dysintericos praecipuus habetur* [« Another substance imported from India is macir, the red bark of the large root of a tree of the same name, which I have been unable to identify. This bark boiled with honey is considered in medicine to be a valuable specific for dysentery » (XII. XVI/32) – translation from RACKHAM 1960, p. 23].

Ethiopian aromatic plant *mäqär*⁵¹, which grows in the Q^wolla-regions. It is used for fumigation⁵². The likelihood of the Greek and Ethiopian names could point to the East African origin of μάκειρ.

- ἄρωμα

The *Periplus* mentions also an aromatic product, which could be bought in a port, τὸ τῶν Ἀρωμάτων ἐμπόριον⁵³ (12: 4. 28). The etymology of ἄρωμα is not clear⁵⁴; it can be compared with ASA *ḥrmt*⁵⁵; cf. also akk. *armannu* – « a tree and the aromatic substance obtained from it; an aromatic used in fumigations » (CAD: 291).

- ἄσφρη

There could be bought in the same port a product called ἄσφρη. This seems to be identical to ASA *tyb*. Similar names are known from other parts of South Arabia – *tuf* (Dufār), *tayf* (Suqūtra – Aloe spp.⁵⁶), *āṭeb* (Mahri) / *aṭabēb* (Baṭḥarī) / *aṭob* (Höbyōt) – *Calatropis procera*.

I.3. Sea-branch of the « Incense Road » between East Africa and Northern Red Sea

According to the *Periplus* one of the branches of the « Incense Road » passed along the Western coast of Arabian Peninsula from Muza⁵⁷ and Okelis (7: 3. 20)

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51. Cf. also : Ge'ez *maqwara* – « be properly hot and spicy », « be tasty », « to taste good » (LESLAU 1991, p. 355).
 52. STRELCYN 1973, p. 197 (No. 163).
 53. On the Northern shore of Somalia at cap Guardafui, near village Damo (CHITTICK 1976, p. 124; CHITTICK 1979, p. 275; CHITTICK 1981, p. 188).
 54. FRISK 1960, p. 159.
 55. MÜLLER 1978a, p. 442.
 56. BANTI, CONTINI 1997, p. 178-179.
 57. Ἐξάγεται δὲ ἐξ αὐτῆς, ἐντόπια μὲν, σμύρνα ἐκλεκτὴ καὶ στακτὴ, Ἄβειρ-αία καὶ Μιναία, λύγδος καὶ τὰ ἀπὸ τῆς πέραν Ἄδουλι προειρημένα φορτία πάντα [« Its export consists of local products – myrrh, the select grade and *stactē*, the Abeirian (?) and Minaean; white marble – as well as all the aforementioned merchandise from Adulis across the water » (24: 8. 8-11) – translation from CASSON 1989, p. 65]. According to Pliny the Elder, Arab traders in incenses traded in Muza : « ...*turis odorumque Arabicorum mercatores* » (NH. VI. XXVI/104).
The word « Μιναία » can refer to the Minaeans, who, according to Pliny the Elder traded in frankincense : *Minaei ... hi primi commercium turis fecere maximeque exercent, a quibus et Minaean dictum est* [« The Minaei ... It was these people who originated the trade and who chiefly practise it, and from them the perfume takes the name of 'Minaean' » (XII. XXXI/54) – translation from RACKHAM 1960, p. 39]. From an other side the reading Ἄβειρ-αία καὶ Μιναία was reconstructed (CASSON

to Leuke Kome and further to the Nabataean capital Petra (19: 6. 26-7. 2)⁵⁸. This branch began in the markets on the opposite – African – shore⁵⁹.

I. 3. 1. Ὀκηλις

Okelis is mentioned in the *Periplus* as a station for water-supply :

Κατὰ τοῦτον τὸν ἰσθμὸν παραθαλάσσιός ἐστιν Ἀράβων κώμη τῆς αὐτῆς τυραννίδος Ὀκηλις, οὐχ οὕτως ἐμπόριον ὡς ὄρμος καὶ ὕδρευμα καὶ πρώτη καταγωγή τοῖς ἔσω διαίρουσι⁶⁰.

1989, p. 64). The presence of the Minaeans on the Bāb al-Mandab is not sure ; their trade activity in the Tihāma could probably be proved thanks to the inscription found in 1978 on the island Farasān al-Kabīr (ZARINS, MURAD, AL-YAISH 1981, Pl. 43C). It was characterized as « probably Minaean » (BEESTON 1995, p. 243, Fig. 5). More convincing is the reading « Ἀβειρ[μιν]αία ». This could be a literal translation of ASA 'br [« other side » (BEESTON, GHUL, MÜLLER, RYCKMANS 1982, p. 11)] and refer to the origin of the myrrh from East Africa. This notion can be regarded as parallel to « ὁ περατικός » (10: 4. 12, 18).

58. The way from Leuke Kome to Petra is described also by Strabo (XVI. 4. 23-24) ; the sea-way – by Agatharchides (*De mari*. § 87).
59. Κομίζουσι δὲ ἄλλα τε, καὶ μάλιστα τὸν εὐώδη καρπὸν τὸν ἐν τῷ πέραν φυόμενον (ἀραβιστὶ δὲ λέγεται λάριμναν), μεγίστην ἔχοντα τῶν ἄλλων θυμιαμάτων εὐωδίαν... Τῶν δὲ Σαβαίων χρώνται καὶ τοῖς δερματίνοις οὐκ ὀλίγοι πορείοις, διδασκούσης τὴν χρεῖαν τῆς ἀναπώτιδος, καίπερ ἐν τρυφῇ καταγινομένους [« They transport cargoes of various sorts including especially an aromatic plant which grows in the interior and is called in the language of the Arabs 'larimumm'... Not a few of the Sabaeans also employ boats made of skins. The tides themselves have instructed them in their use, although they live in luxury » [(Agath. *De mari*. 103a) - translation from BURSTEIN 1989, p. 167] ; *convehitur et ex insulis laudata, petuntque eam etiam ad Trogodytas Sabaiei transitu maris* [« A kind highly spoken of is also imported from islands, and the Sabaei even cross the sea to the Cave-dwellers' Country to procure it » (Plin. *NH*. XII. XXXIII/66) – translation from RACKHAM 1960, p. 49] ; « Φέρεται δ' ἐξ αὐτῆς, ποτὲ καὶ τῶν Βαρβάρων ἐπὶ σχεδίας διαφερόντων εἰς τὴν ἄντικρυς <Ὀ>κηλιν καὶ Μούζα, ἀρώματα καὶ ἐλέφας ὀλίγος καὶ χελώνη καὶ σμύρνα ἐλαχίστη, διαφέρουσα δὲ τῆς ἄλλης » [« Exports from here, with the transport across to Okêlis and Muza on the opposite shore at times carried out by the Barbaroi on rafts, are : aromatics ; a little ivory ; tortoise shell ; a minimal amount of myrrh but finer than the other » (*PME*. 7: 3. 18-21) – translation from CASSON 1989, p. 55] ; Ἐκφέρεται δὲ ἀπὸ τῶν τόπων τούτων καὶ σμύρνα καὶ λίβανος ὁ περατικός ὀλίγος καὶ κασ[σ]ία σκληροτέρα καὶ δουακα καὶ κάγκαμον καὶ μάκειρ, τὰ εἰς Ἀραβίαν προχωροῦντα, καὶ σώματα σπανίως [« Exports from this area are : myrrh, a little 'far-side' incense ; a rather harsh cassia, *duaka*, *kankamon*, *makeir*, which items are exported to Arabia ; on rare occasions slaves » (8: 3. 29-32) – translation from CASSON 1989, p. 55].
60. « Along this strait is Okêlis, an Arab village on the coast that belongs to the same province ; it is not so much a port of trade as harbour, watering station, and the first place to put in for those sailing on » (25: 8. 18-20) – translation from CASSON 1989, p. 65.

This place is mentioned by different authors in different ways. Strabo after Artemidorus Ephesius (XVI. 4. 4) calls it a « cap » : Φησὶ δ' Ἀρτεμίδωρος τὸ ἀντικείμενον ἐκ τῆς Ἀραβίας ἀκρωτήριον τῆ Δειρῆ καλεῖσθαι Ἀκίλαν. Okelis was mentioned on other occasions in the *Periplus* (7: 3. 19, 26: 8. 21, 25) and by Pliny the Elder (*NH*. VI. XXVI/104, XXXII/151, XII. XLII/88). Ὀκηλις was also called « semi-island » in the *Geography* of Ptolemy⁶¹, as well as Ὀκηλις ἐμπόριον in the description of the coastal line of Arabian Peninsula (41 ; VI. 7. 7).

The origin of the Greek name Ὀκηλις and the identification⁶² of the place itself still remain a problem to solve. In the opinion of Chr. Robin, it is not possible to decide from which local place-name⁶³ did the Greeks borrow this name⁶⁴. However, in the opinion of Chr. Robin and his coauthors, the port of Okelis had to lie in the place called 'QN'L in an Ethiopian inscription of the first half of the 6th century AD (RIÉ 195-II/[16]-17)⁶⁵. This identity is based on the similarity of both place-names, as well as on the fact that Ḥawr Ġuraira is one of the few places in the Southern part of the Red Sea, where the reefs do not impede landing.

However, the Ethiopian inscription in question does not let us think that 'QN'L was a place of transfer of the Ethiopian army from Africa to Arabia. Neither it is clear if this place was ever located on the sea-shore (which from the other side can not be excluded). It rather mentions the place of the victory of the Ethiopian army over the army of Ḥimyar. The inscription RIÉ 195 was found in Mārib, which is an additional, though indirect, argument for searching 'QN'L on the mainland. The linguistic connection of both place-names (Ὀκηλις and 'QN'L) also needs to be proven.

The *Kitāb ġāmi' al-funūn wa-salwat al-mahzūn* (1125) of al-Ḥarrānī mentions the island al-'Aql, which lay by the shore of Yemen at the place, where the Abyssinian army (the Abreha's campaign was in question) crossed the straits

61. Πτολεμαῖδος δὲ καὶ τοῦ Ἀδουλιτικοῦ κόλπου τὰ στενὰ τὰ κατὰ Ὀκηλιν τὴν χερσόνησον καὶ Δεῖρην σταδίους τρισχιλίους πεντακοσίοις [« The straits between the semi-island Okelis and Deire lies in 3500 stades from Ptolemais and Adulis » (I. 15. 11) ; the same is in the *Geography* of Strabo (XVI. 4. 5)].

62. Earlier identifications : Ḥawr Ġurayra in the bay Ṣayḥ Sa'īd in front of island Perim (SPRENGER 1875, p. 67 ; GLASER 1890, p. 169).

63. The extreme South-West of the Arabian Peninsula was called in the South Arabian inscriptions MDBN (Maddabān) (Ja 1028/4 : MDBN), cf. Arab. *mandab* (« chain »). This chain was thought to have been stretched through the bay of Ṣaiḥ Said, where the port of Okelis was supposed to have been (BEESTON 1989, p. 1-6). From the other side this chain was regarded as « mountain chain » or « hilly places » near modern village Ḥawr Ġuraira and homonymous fortified point (Okelis) in the mouth of this strait (BAUER 1990: 232-233, n. 4). It is possible that one has to see the chain of reefs and smaller islands, which encircled the ancient MDBN.

64. ROBIN 1995, p. 225, 232.

65. BEAUCAMP, BRIQUEL-CHATONNET, ROBIN 1999-2000, p. 40-41.

of Bāb al-Mandab ⁶⁶. It is possible that one and the same place was mentioned : the coastal line of the extreme South West Arabia in the 2nd half of the 13th century (the supposed time of life and activity of al-Ḥarrānī) could have risen in comparison with the beginning of the Christian era and the « port » Ὀκηλις could easily turn in the island al-‘Aql ⁶⁷. It is worth mentioning again that Strabo and Ptolemy called Okelis a semi-island : so, the rising of water could easily cut it from the mainland. The further changes of the water regime in the South-West part of the Red Sea could lead to the disappearance of the island under water.

Okelis was called a fortified well / water reserve (ὕδρευμα) in the *Periplus* (25: 8. 20). Such ὑδρεύματα were frequent in Egypt and were perfectly known to the Greek and Roman traders. The name al-‘Aql, which the author of the *Periplus* could have rendered as Ὀκηλις goes back to the root ‘QL ⁶⁸. Its main meaning is « to retain something »; cf. esp. Arab. *ma‘qil* – « a place to which one betakes himself for refuge, protection, preservation, covert, or lodging..., fortress » ⁶⁹.

Place-names, which go back to the same root, are known from the work of Yaquṭ [III. 698. 12-13 (in Ḥawrān), III. 703. 16 (in Tihāma)]; cf. the names of wells ‘Aqalat an-Nahāla and ‘Aqalat ar-Rims in ‘Umān, mentioned in the report of W. Thesiger ⁷⁰, or the name of the settlement Ma‘aqala on the Eastern border of the Little Nafūd (26°30’N ; 47°20’E). The name al-‘Uqla in Ḥaḍramawt is semantically closely connected with Ὀκηλις; cf. the etymology of ‘uqla : « Espace, où, en quelque points qu’on déblaye le sable, on est assuré de trouver de l’eau » ⁷¹.

One has to connect the presence of water reserves in Okelis, as in the *Periplus*, its description as a fortified place and water-station with the meaning of the root ‘QL ; then the picture becomes totally clear : the informant of Strabo (Artemidorus Ephesius) and that of the author of the *Periplus* have rendered the local name of this place, which went back to its functional destination.

It is also possible that the name Ὀκηλις was rendered as Βουλικάς in the description of the place of crossing between Ethiopia and Ḥimyar (Procop. 1. 19. 31) : here as in some other cases in the Semitic place-names on the Arabian peninsula in Ptolemy’s rendering (153 ; VI. 7. 24 ; 278 ; VI. 7. 43 ; 295 ; VI. 7. 47) one may suppose the change of a pharyngeal ‘ by a semi-vocal and the transposition of the root-consonants : ‘QL > *uql > *ulq > Βουλικάς.

66. See edition and commented translation in : DOBRONRAVIN, POPOV 2002, p. 279.

67. Earlier proposed in fewer details in BUKHARIN 2011, p. 226.

68. This was pointed out already by O. Blau, who searched for Okelis near Ta‘izz (BLAU 1873, p. 309).

69. LANE 1877, p. 2113, 2116.

70. THESIGER 1949, p. 40-41.

71. DOZY 1881 (II), p. 154.

Identification of Ὀκηλις with the island al-‘Aql and that of the island Πολυβίου (Ptol. *Geogr.* 278 ; VI. 7. 43) with modern island Halba Desset⁷² let us suppose that the straits of Bāb al-Mandab were smaller than in modern times : Halba Desset lies on the African shore, while it belongs to the Arabian shore on Ptolemy’s map. So, during the low tides the straits of Bāb al-Mandab could be waded.

I. 3. 2. *The island* Διοδώρου / *cap* Δειρή

The possible fluctuation of the sea-level in the Southern Red Sea, supposed to have taken place on example of Okelis, could be further demonstrated and confirmed by the account of Classical sources on the islands Diodoros and Oreine.

As far as we know from the account of Eratosthenes (apud Strabo. XVI. 4. 4, 13, 15), there was a cap called Δειρή on the African side of the modern straits of Bāb al-Mandab, i.e. the local sea-traders, most probably, had to pass it on the way to Okelis and Muza. Ptolemy also knows a cap and a city Δειρή on the African side of Bāb al-Mandab (IV. 7. 9). The author of the *Periplus* has also described this region. Important is the following :

Μετὰ δὲ ταύτην ὡσεὶ τριακοσίους παραπλεύσαντες σταδίου, ἤδη συνερχομένης τε τῆς Ἀραβικῆς ἡπείρου καὶ τῆς πέραν κατὰ τὸν Αὐαλίτην Βαρβαρικῆς χώρας, αὐλῶν ἔστιν οὐ μακρὸς, ὁ συνάγων καὶ εἰς<σ> στενὸν ἀποκλείων τὸ πέλαγος, οὗ τὸν μεταξὺ πόρον ἐξήκοντα σταδίων μεσολαβεῖ νῆσος ἢ Διοδώρου⁷³.

It is not entirely clear at first sight if 60 stades is the width of the straits or that of the island Diodoros in the *Periplus*. However, Eratosthenes also gives 60 stades as the width, definitively, of the straits of Deire : « τὰ δὲ κατὰ Δειρήν στενὰ συνάγεται εἰς σταδίου ἐξήκοντα » (apud Strabo. XVI. 4. 4). We would not exaggerate if we regard both accounts as relating to one and the same place. The difference is that the author of the *Periplus* places the island Diodoros (νῆσος ἢ Διοδώρου) in the straits between Arabia and Africa, while Eratosthenes and later geographers place there the cap Deirē (Δειρή). Both rendering of a local name, Διοδώρου and Δειρή, are quite similar : they have the same consonants, but different vowels. It seems that the name Διοδώρου could be regarded as consisting of two parts : Διο- and -δώρου. The former could therefore render Semitic relative pronoun *ḏū* and the former be the proper place-name. Such rendering of *ḏū* can

72. See for details in BUKHARIN 2009, p. 191.

73. « About a 300-stades sail past this port, the Arabian mainland and the country of Barbaria across the water in the vicinity of Avalites converge to form a strait, not very long, that contracts the waters and closes them off into a narrow passage ; here in the middle of the channel, 60 stades wide, stands Diodōros Island » (25: 8. 13-17) – translation from CASSON 1989, p. 65.

also be traced back in the name of Διοσκουρίδου, given by *Periplus* itself (30: 10. 3) and by Ptolemy (288; VI. 7. 45) as Διοσκουρίδου (πόλις) : *D-ŠKRD⁷⁴.

The difference in vowels can be explained by the proper way of rendering of Semitic vowels by the author of the *Periplus* (or his informants). The second part of the form (νήσος ἤ) Διοδώρου seems to go back to *dār* (*DWR – « to turn around ») and to a form like Arab. *dāwra* (« circle »). The form Δειρή seems to reflect a form like Arab. *dā'ira* (« circle », « latitude » or the like). So, instead of cap Deirē there appears on the map of ancient Bāb al-Mandab island Diodoros, which was, if the reconstruction of the name is correct, an important orientation point in the modern straits of Bāb al-Mandab before exit into the open sea.

The name Διόδωρος seems to reflect a kind of common designation of an island, which possible served in a special (not specified by the author of the *Periplus*) way. This follows from the existence of another island with a resembling name Δίδωρος (4: 2. 2 ; Διοδώρου in the manuscript of the *Periplus* of the British Library), which was identified with one of the islands of the Massawa Harbour⁷⁵. This was an island lying at the entrance to the bay of Adulis. Ptolemy calls this island Διόδωρος (IV. 8. 38). It seems that Δίδωρος is a corrupted form and the spelling Διόδωρος is to be preferred. One may find a similar case of dropping of a vowel in the name Βερνίκη (e.g. in 1 ; 1. 3-4) instead of normal Βερενίκη.

One may also mention in this respect an island Ὀρεινή (*PME*. 4: 1. 21) – « Mountainous », lying right in front of Adulis, which was designated by Ptolemy as Ὀρεινή Χερσόνησος (IV. 7. 8) – so we have the third case of an island in the modern Red Sea in the *Periplus* turning into a cap in the other sources.

Ptolemy also has an island Ἄρη on his map (282; VI. 7. 44). This name comes from Sem. *'r – « Mount ». However, it is not identical to the Ὀρεινή-island of the *Periplus* or Ὀρεινή Χερσόνησος of Ptolemy. It is situated on Ptolemy's map near the « Burnt » Island, i.e. closer to the Arabian shore of modern Red Sea.

74. For details see BUKHARIN 2009, p. 193.

75. CASSON 1980a, p. 495. See against this identification: BUKHARIN 2011, p. 224-225; here a supposition is put forward that the island Diodoros had to disappear under water due to the changes of the sea-level in the modern Red Sea.

I. 3. 3. Μούζα ἐμπόριον

Μούζα ἐμπόριον lay according to *Periplus* in the last bay of the Arabian shore of modern Red Sea⁷⁶ and is commonly identified with al-Muḥā'⁷⁷ (ΑΣΑ ΜΗΨΝ⁷⁸). The name Μούζα goes back to the name of the settlement Mawza', which is situated 26 km to the southeast from al-Muḥā'. The information of the Classical sources about Okelis, islands Diodoros and Oreine (see above), which allowed to suppose the possible changes of the sea-level of the Red Sea and, correspondingly, those of the coastal line, let us suppose, that the bay, where Μούζα ἐμπόριον had to lie, disappeared and earlier coastal settlement appeared to be situated far in the mainland.

The *Periplus* (8: 3. 29-32) reports of the export of the East African species to Arabia (τὰ εἰς Ἀραβίαν). Moreover, its author mentions the Arabs trading in Muza⁷⁹. Taking into consideration Pliny's remark in VI. XXVI/104 that Muza was not a port of trade with India ([...] *Muza, quem Indica navigatio non petit*), the information of the trade contacts of Muza with Barygaza is to be interpreted so that the « Arabs » from Muza and the sea-traders from Barygaza were meeting on Suqutrā' (so in PME 31 : 10. 21-22).

Muza was connected with the most important political centers of the mainland – Sawwā' and Dafār⁸⁰. The Himyarites themselves did not practice camel-breeding and caravan trade. The dedications to dū-Samāwī from as-Sawwā' (Šar'abī-as-Sawā 1) and Hammat-Buḍān (DS Buḍān-01 no.6/2) point to the existence of the

76. [...] ἐν κόλπῳ τῷ τελευταίῳ τῶν εὐωνύμων τούτου τοῦ πελάγους « [...] on the very last bay on the lefthand shore of this sea » (21: 7. 18-19) – translation from CASSON 1989, p. 63. The location of Muza « on the very last bay » of Arabian shore makes impossible its identification with Mawšiḡ, lying north of al-Muḥā' (proposed in VON WISSMANN 1964, p. 291 ; VON WISSMANN 1968b, col. 1314 ; MÜLLER 1978b, p. 726).

77. GLASER 1890, p. 139 ; SCHOFF 1912, p. 106 ; WARMINGTON 1928, p. 9, 53 ; BEESTON 1981, p. 356 ; ROBIN 1995, p. 225.

78. See for references in the ASA inscriptions : AL-SHEIBA 1987, p. 51.

79. Τὸ μὲν ὅλον Ἀράβων, ναυκληρικῶν ἀνθρώπων καὶ ναυτικῶν, πλεονάζον [δὲ] καὶ τοῖς ἀπὸ ἐμπορίας πράγμασι κινεῖται· συγχρῶνται γὰρ τῇ τοῦ πέραν ἐργασία καὶ βαρυγάζων ἰδίῳι ἐξαρτισμοῖς [« The whole place teems with Arabs – shipowners or charterers and sailors and is astir with commercial activity. For their share in the trade across the water and with Barygaza, using their own outfits » (21: 7. 21-23) – translation from CASSON 1989, p. 63].

80. Ὑπέρεκται δὲ αὐτῆς ἀπὸ τριῶν ἡμερῶν πόλις Σαυή ... Καὶ μετ' ἄλλας ἐννέα ἡμέρας <Σ>αφάρ μητρόπολις [« A three days journey inland from Muza is Sauē ... Nine days further inland is Saphar, the metropolis » (PME 22: 7. 24–23: 7. 27) – translation from CASSON 1989, p. 63].

colonies of 'Amīr – the most important camel-breeders in South Arabia on the way to Muza.

The Qatabānian inscriptions point to the existence of the caravan way through Sawwā' and Ḍafār earlier than in the time of the *Periplus*. The inscription RES 4329/1 from Ḥinū-az-Zurayr mentions *š'bn/dhrbt/hwr/hgrn/šwm*, i.e. the colonists of the tribe of Haribat in Sawwā'. They had also formed a colony in Ḍafār⁸¹ : *'š'bn/hrbn/hwr/hgrn/zfr* (Ry 497/1 also from Ḥinū az-Zurayr and MuB 554/1). These inscriptions are dated to the period C, i.e. to the end of the 1st century BC – beginning of the 1st century AD⁸². Inscription Ja 2898/1 from al-'Adī mentions the Qatabānian tribe dū-Maryamat, the colonists of Ḍafār (*š'bn/dmrytm/hwr/hgrn/zfr*). This inscription is dated to the reign of king of Saba' and dū-Raydān Karib'īl Watar Yuhan'im, i.e. to the time of Charibael of *Periplus*. It is hardly possible to suppose any other reasons of the existence of the colonies of Qatabān in Sawwā' and Ḍafār, than participation in the caravan-trade through the capitals of Ḥimyar and Ma'āfir. These colonies could only appear in the period of domination of Qatabān in South Arabia (4th–3rd centuries BC).

A hoard of more than 300 silver Qatabānian coins was discovered near Ta'izz at the village as-Surayra. The hoard is supposedly dated to the middle of the 4th-2nd centuries BC. One of the coins (No 5 in the catalogue) is a genuine « oriental imitation » of the Athenian coinage of the « ancient style » and points to the connections of the possessors of the hoard with the Eastern Mediterranean⁸³. It is possible that the road to Muza passed through there : the find place is about 100 km from the shore.

I. 3. 4. *The way to Leuke Kome*

The way further to Λευκή κόμη can be reconstructed thanks to the information of Ptolemy :

Σακατία πόλις (37 ; VI. 7. 7)⁸⁴ < arab. *Šaqqa*⁸⁵. Any identification on the modern map fails.

81. H. von Wissmann was quite wrong, regarding ZFR as a name of the enclosed place in the region of HRBT (VON WISSMANN 1968c, p. 21).

82. AVANZINI 2004, p. 30.

83. 'ABDULLAH, GHĀLEB, SEDOV 1997, p. 210.

84. Earlier identified with aš-Šuḥāri (VON WISSMANN 1963) and with the region near modern Bū Zāḥār to the north of Ḥauḥa (VON WISSMANN 1968b, col. 1320). Both identifications cannot be accepted, since the names proposed contain *r* at the end.

85. In this context this name can be regarded as designation of a kind of landscape ; cf. « fissure », « cleft », « split » (LANE 1863, p. 1577).

Ναπηγοῦς κώμη (37 ; VI. 7. 7)⁸⁶ = Mawšič (13°43'22"N ; 43°16'36"E). One has to mark out the rendering of *w* through **p* (π)⁸⁷, and that of *m* through **n* (ν). The alternation is accompanied with metathesis as in some other cases on his map⁸⁸.

Αἴλου κώμη (35 ; VI. 7. 7)⁸⁹ = Ḥalā (14°48'10"N ; 43°03'53"E).

Πούδνου πόλις (34 ; VI. 7. 7) = al-Baydā' (14°52'59"N ; 43°20'27"E) (?).

Ἄδηδου κώμη (32 ; VI. 7. 6)⁹⁰ = al-Ḥudayda (14°48'31"N ; 42°56'16"E).

The find of the hoard of 181 Sabaeen coins of the end of the 4th century BC near al-ʿAydab can also be regarded as pointing to the functioning of one of the branches of the Incense Road through Tihāma and Yemeni Highlands. This find was made at the supposed station on the road, which connected the shore of the Red sea from al-Ḥudayda with the mainland⁹¹.

Μάμαλα κώμη (31 ; VI. 7. 6)⁹² = Mimla / Mamla. This place lies ≈ 43°20'E ; 13°39'N and must be to the south of al-Ḥudayda, not to the north, as localized by Ptolemy ; = Μαμάλι of Theophrastus (*Hist. Plant.* IX. 4. 2) ; Pliny also knows *litus Mameum* (NH. VI. XXXII/150) ; however this place seems located outside Southwest Arabia.

Ἄμβη πόλις (30 ; VI. 7. 6)⁹³ = a more reasonable reading is Ἄκμη⁹⁴. In this case Ἄκμη would be connected with ASA ethnic name 'KM and the Ἄμβη πόλις would in fact mean « city of 'KM ».

86. Earlier identified with a fishers' village near modern Rās Mutayna (VON WISSMANN 1968b, col. 1320).
87. Θαπαύα (173 ; 6. 7. 27) < Tawba ; Ἄσπα (224 ; 6. 7. 34) < Nazwa) and in *Natural History* of Pliny the Elder : *Capeus* (VI. XXXII/147) < Kuwait ; *Paramalacum* (VI. XXXII/157) < ASA W'RM ; *Pallon* (VI. XXXII/159) < ASA W'LN.
88. Ἰχάρα (295 ; VI. 7. 47) < arab. Faylaka ; Βουλικάς (Procop. I. 19. 31= Ὀκηλις : 41 ; VI. 7. 7) < 'QL.
89. For the first efforts to identify this name, see MÜLLER 1893c, p. 1008 ; also identified with Marsā al-Ġau at the mouth of Wādī Badwa (VON WISSMANN 1968b, col. 1320).
90. Earlier identified with 'Uṭayna (VON WISSMANN 1963). The emphatic *t* in no way was rendered in Greek as δ ; the second δ could not correspond to *n*. So, this identification is to be rejected.
91. DAVIDDE 1995, p. 246.
92. Earlier identified with Luḥayya (VON WISSMANN 1957, p. 300, n. 42b (from arab. *mamlaha* – « Mount of salt ») ; VON WISSMANN 1963 ; VON WISSMANN, HÖFNER 1953, p. 111, n. 2) ; Ma'mala in 'Asīr (MÜLLER 1996, p. 319).
93. Earlier identified with Arab. Ḥakam, a part of Banū Sa'd al-ʿašīra (SPRENGER 1875, p. 44-45) or with al-Ġīzān (16°53'54"N ; 42°32'55"E) (VON WISSMANN 1963).
94. HUMBACH, ZIEGLER 1998, p. 88, 6. 7. 6, n. 5.

Βαδεῶ Βασίλειον (29 ; VI. 7. 6)⁹⁵ = this name seems to come back to Arab. *bādū* ; in this case it would mean « capital of Bādū » ; it seems to be identical with *Vadaei oppido magno* (*Vadaei with a big city*) of Pliny the Elder (*NH.* VI. XXXII/155).

Θῆβαι πόλις (24 ; VI. 7. 5) = Ḍahbān (21°56'48"N ; 39°04'55"E)⁹⁶.

Κέντος κώμη (23 ; VI. 7. 5)⁹⁷ = Ğudda, in local pronunciation Ğidda (21°32'47"N ; 39°09'50"E). One has to take into consideration the pronunciation of *g* in Ḥiḡāz as *q*⁹⁸ for the correct analysis of the name Κέντος, as well as dissimilation of *geminates dd > nd* (ντ) (Κέντος < **qnd* < √*GDD* > Ğudda⁹⁹).

Ζαδράμ Βασίλειον (22 ; VI. 7. 5)¹⁰⁰ = Mastūra (23°06'27"N ; 38°50'00"E). The reading Ζαδράμη in the *Ethnica* of Stephanus of Byzantium¹⁰¹ lets us identify the capital of Kinaidokolpitai with Mastūra. The vocalization *s > z* was one of the peculiarities of the West Arabian dialects, e.g. that of the dialect of Kalb¹⁰² ; *ma* here is a prefix, building the *nomina loci*. The reading Ζαδράμη is also given by Herodianus in his *De prosodia catholica* (3. 1. 325).

95. Earlier identified with Ğidda (VON MALTZAN 1865, p. 220-221) ; Bayd (SPRENGER 1875, p. 48-49). If the name Βαδεῶ reflected the name of Wādī Bayḍ, there were no difference between the names Βαιτίος and Βαδεῶ.

96. = Dahlimar (VON MALTZAN 1865, p. 198, 205) ; Wādī Tayya (MORITZ 1923, p. 108) ; Ṣabya (PIRENNE 1955, p. 159, прим. 3) ; Ḥālī or Ḍahbān (VON WISSMANN 1957, p. 299-300) ; Ḍahbān (VON WISSMANN 1963) ; Mahd ad-Ḍahab (23°29'43"N, 40°52'24"E) (VON WISSMANN 1964, p. 157 ; VON WISSMANN 1968a, col. 1310).

97. Earlier identified with « Mersa Deneb » (VON MALTZAN 1865, p. 198) or with al-Qunfūḍa (VON WISSMANN 1963). The identification with al-Qunfūḍa can not be accepted : *f* is not rendered in the Greek name and *ḍ* was never rendered as τ. Moreover al-Qunfūḍa lay to the south of Ḍahbān and such an identification would break the logic of description of Ptolemy's map.

98. RABIN 1951, p. 125-126.

99. The Dissimilation of *geminates* as peculiarity of Old Arabic dialects was discussed in CORRIENTE 1976, p. 74, n. 1, 80, n. 2 ; cf. : ḡandal < *ḡndl < *ḡddl < √*GDL*.

100. = Rabīḡ (VON MALTZAN 1865, p. 198) ; Marsā Ibrāhīm (Ge'ez zā-Abrāham) near al-Līḡ (VON WISSMANN 1963 ; VON WISSMANN 1968a, col. 1304, 1307). Marsā Ibrāhīm lies not on the Arabian, but on the African coast – in modern Erythraea (18°52'81"N ; 37°24'83"E) and in Sudan.

101. Ζαδράμη, βασίλειον τῶν Κιναιδοκολιπτῶν (372. 14).

102. RABIN 1951, p. 195.

Ἄργα κώμη (21; VI. 7. 5)¹⁰³ = Rayyis (23°34'45"N ; 38°36'27"E) with alternation *y / g* (?) ; = Ἐργα κώμη (Strabo. XVI. 4. 24) (?) – the starting point of the army of Aelius Gallus from Arabia to Egypt.

Κόπαρ κώμη (20; VI. 7. 5)¹⁰⁴ = al-Ġār¹⁰⁵. Here one may observe the following phonetic peculiarities : Ġār < *Gawar > *Qawar > Κόπαρ : *g* in the ḥiġāzī dialect was pronounced as *q*, while a semivowel *w*, as in some other cases on Ptolemy's map of Arabia (see above), was rendered into Greek as π. It did not turn into a long vowel as in modern Arabic.

Ἰαμβία κώμη (13; VI. 7. 3) = Yanbū' al-Baḥr ; = *insula Iambe* (Plin. NH. VI. XXXIII/168).

Χερσόνησος ἄκρα (12; VI. 7. 3)¹⁰⁶ = Rās Ḥurayya (about 30 km to the south of al-Waḡḥ).

Λευκή κώμη. The port of Leuke Kome is an interesting case of rendering of the local names in the Red Sea-basin, since it seems not be attested in its usual form in the description of the world map of Ptolemy. His description of Arabia is very detailed, as that of Pliny's *Natural History*. As Pliny, he used many sources of different time and provenance ; he practically does not give the names of his informants. In spite of various repetitions, aberrations and other kinds of mistakes the information of Ptolemy is in some cases datable up to the beginning of the Hellenistic period¹⁰⁷.

The first and most evident difference between the *Periplus* and Ptolemy's *Introduction into Geography* is the quantity of place- and ethnic names. More important is the difference not only in quantity of the names. One and the same name is given in the description of Arabia in very different way.

So, the *Periplus* describes the way from two ports of Roman Egypt to the port of Leuke Kome :

Ἐκ δὲ τῶν εὐωνύμων Βερνίκης ἀπὸ Μυδὸς ὄρμου δυσὶν δρόμοις ἢ τρισὶν εἰς τὴν ἀνατολὴν διαπλεύσαντι τὸν παρακείμενον κόλπον ὄρμος ἐστὶν ἕτερος καὶ

103. = Rās Mastūra (VON MALTZAN 1865, p. 169) ; Ġidda (VON WISSMANN 1963) ; = Arab. 'irq / 'urq (« dune ») (VON WISSMANN 1968a, col. 1306).

104. = al-Ġār (VON WISSMANN 1963).

105. BUKHARIN 2007b, p. 233.

106. Earlier identified with « Eiland Um-er-Ruma » (VON MALTZAN 1865, p. 92) and with Rās 'Abū Madd (VON WISSMANN 1963).

107. Ptolemy mentions Θιαλήμαθ κώμη on his map, which bears another name Θιάλληλα (69; VI. 7. 10). The latter perfectly corresponds to the name of modern Ṣalāla (17°01'19"N ; 54°05'43"E). Θιαλήμαθ seems to go back to Greek Πτολεμαῖς through ASA TLMYΤ (cf. rendering of the name Πτολεμαῖος in the Minaean inscription RES 3427 = M 338/3) : Πτολεμαῖς > TLMYΤ > Θιαλήμαθ. It seems that there was a settlement Πτολεμαῖς on the Southern coast of Arabia, whose existence was not known from other sources ; for more details see BUKHARIN (in press).

φρούριον, ὃ λέγεται Λευκὴ κώμη, δι' ἧς ἔστιν εἰς Πέτραν πρὸς Μαλίχαν, βασιλέα Ναβαταίων, <ἀνάβασις>¹⁰⁸.

This description is quite uncertain and quite different opinions on the identification of Leuke Kome on the modern map have been developed¹⁰⁹. The only acceptable interpretation of the fragment of the *Periplus* in question is the following one : the *Periplus* says that Leuke Kome lies at the final point of the way to the left of Berenice – to the East of Myos Hormos – two or three stages – after having crossed the adjacent bay (19: 6. 26-27). That is to say that if one wishes to reach Leuke Kome, he must start at Berenice, turn left (northwards), pass through Myos Hormos, then go on sailing east of it and across the bay lying near Leuke Kome. Location of Myos Hormos is precisely determined : this ancient port is located in modern Quşayr al-Qadīm¹¹⁰. If sailing to the East of it, one inevitably reaches al-Wağh, and the « adjacent bay » can only be Šarm al-Wağh¹¹¹.

In this connection very interesting seems the name Ῥαυνάθου κώμη given on the map of Arabia by Ptolemy (11 ; VI. 7. 3). The coordinates of Ῥαυνάθου κώμη on Ptolemy's map (67°15'E ; 25°40'N) point to its location about 185 km to the north of Yanbu al-baħr (Ἰαμβία κώμη of Ptolemy in *Geogr.* VI. 7. 3) on the modern map, i.e. somewhere in the vicinity of modern al-Wağh (26°14'05"N ; 36°27'55"E). The initial *r (Greek ρ) in the name of Ῥαυνάθου can be regarded as an example of change with *l¹¹². If so, the place-name Ῥαυνάθου can be driven back to Arab. *labanat*, which had to be the initial form for Λευκὴ κώμη (« White village »).

The camel road from al-Wağh to al-‘Ulā goes in Eastern and Southeastern directions. Julius Euting followed the way from al-‘Ulā to al-Wağh in April 1884.

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108. « To the left of Berenicê, after a voyage of two or three runs eastward from Myos Hormos past the gulf lying alongside, there is another harbor with a fort called Leukê Komê [“white village”], through which there is a way inland up to Petra, to Malichus, king of the Nabataeans » (19: 6. 26-28) – translation from CASSON 1989, p. 61 ; see for the discussion of the origin of this fragment : BUKHARIN 2012 (in press).
109. For more details see BUKHARIN 2007a, p. 98-104 ; BUKHARIN 2009, p. 138-145.
110. REDDÉ, GOLVIN 1987, p. 61, 63 ; PEACOCK 1993, p. 226-239 ; BULOW-JACOBSEN, CUVIGNY, FOURNET 1994, p. 27-42.
111. Earlier proposed in BUKHARIN 2005-2006, p. 138.
112. The change *r / l* was quite widespread in Arabic, in particular in the Qays-dialect (KOFLENER 1940, p. 77-78). According to another view, there was no change of *r / l*, but both Arabic consonants in the middle of the 2nd century AD still reflected one and the same phoneme. See for more details MAIZEL 1983, p. 159-160. See also an example of rendering *l with *r: Lat. *serichatum* (Plin. *NH.* XII. XLV/99) < Arab. *salīḥa* ; Ἀρόη (Ptol. *Geog.* 191; 6. 7. 30 ; *Arreni* in Plin. *NH.* VI. XXXII/157) < Ḥa‘īl.

As follows from his account, this way was actively used by traders¹¹³. The way from al-‘Ulā to Petra follows the main branch of the « Incense Road ».

The finds of the rock-drawings from Rī‘a Salamat, Madhbah and Mahağğā (Eut. 557 ; Ph. 262f ; Ph.275q), representing ships, on the mainland, confirm the connections of local Tamūd population with sea.

II. Geography of the Red Sea basin in the *Periplus* : towards the personality of its author

The origin and occupation of the author of the *Periplus* remain uncertain. Nevertheless there are some fragments of the text, which could shed some light on his personality. Some of them concern geographic conceptions, others – « political » subjects.

The geographic horizon of the author of the *Periplus* is quite surprising. From the one hand he gives place- and ethnic names (or, at least, the variants of their names), which do not occur in other sources : Κανραΐται (20: 7. 11), Ὀραία (37: 12. 16), Σίνθος (38: 12. 24). From the other hand the author of the *Periplus* does not mention the names which appeared in practically each description of Arabia in Classical geography, e.g. in contrast to other Classical authors he does not mention the port of Gerrha – the most important trade-centre of East Arabia (identification with modern al-‘Uqayr has been proposed¹¹⁴). The name of ‘Aden was already known in Classical tradition : as island *Sadanum* it was mentioned by Pliny the Elder (VI. XXXIV/175). He mentions no name of South Arabian kingdoms : neither Saba’, or Ḥimyar, Ḥaḍramawt, Qatabān (the capital of Qatabān either), ‘Awsān (Wusr) – these names, known to Pliny, were not mentioned by the author of the *Periplus*. He knows the kingdom of the Sabaeans and Homerites – the « composition » of the kingdom of Saba’ and dū-Raydān of two parts is factually correct, but the names of the kingdoms themselves are totally omitted. He calls Ḥaḍramawt the « frankincense-bearing land » under the influence of previous Classical tradition. It is interesting to point out that the only local name of a region in South Arabia, which was rendered by the author of the *Periplus*, was the name of the land of Ma‘āfir. One may conclude from the different remarks in the text¹¹⁵ that namely Ma‘āfir was a regional power, as Saba’ and dū-Raydān in the middle of the 1st century AD.

113. EUTING 1993, p. 143-147.

114. BUKHARIN 2007b, p. 80-85.

115. E.g., the author of the *Periplus* remarks that Azania was subdued to the king of the Sabaeans and Homerites and to the tyrant of Mapharitis : Ὑποπίπτει μὲν οὖν, ὡσερ ἡ Ἀζανία Χαριβαήλ καὶ τῷ Μαφαρίτη τυράννῳ (31: 10. 19-20).

In contrast to Agatharchides and Pliny the Elder, he describes Arabia as a deterrent country. He mentions practically no station between the southern frontier of Nabataea and the South Arabia. Some other things are of interest : in contrast to Pliny or Ptolemy the author of the *Periplus* does not mention sea-piracy¹¹⁶ either in the Red Sea or near the Indian shore. He mentions certain Κανραῖται (20: 7. 11) and the people from the islands of Kalaiou in the Persian Gulf¹¹⁷. It is noteworthy

116. The only fragment, where the editors of the *Periplus* wanted to see the mention of the pirates, is a description of the ἄνθρωποι ὄρατοί (16: 6. 6-7). The manuscripts reads ορατοί, the change to ὄ was made by the « second hand ». H. Frisk has changed in his edition of the *Periplus* ορατοί for πειραταί (FRISK 1927, p. 6), which was approved by J.W.B. Huntingford (HUNTINGFORD 1980, p. 30, 63), who said that there is no information that they were not pirates. Earlier this was proposed in SCHOFF 1912, p. 28 (« men of piratical habits »). It is interesting that Pliny the Elder also mentioned *Trogodytae praedones* (37. 107), who could be compared with ἄνθρωποι ὄρατοί of the *Periplus* if one reads πειραταί with SCHOFF and FRISK.

G. Giangrande found the reading ὄρατοί senseless and proposed a correction ἄροται (« tillers of the soil »), which in his opinion palaeographically and ethnographically fits the reality of the region in question (GIANGRANDE 1975, p. 293-294). O. Bucci thought that both corrections of ὄρατοί – for ἄροται and for πειραταί – were ungrounded (BUCCI 1977, p. 300-305) ; however G. Giangrande once again supported the reading ἄροται (GIANGRANDE 1981, p. 49-52). L. Casson retained ὄρατοί, however left « tillers of the soil » in his translation (CASSON 1989, p. 61). Casson's translation was wrongly understood by J. Vansina (VANSINA 1997, p. 393) : « oratoi » was referred to « very big-bodied », while « tillers of the soil » was omitted.

As to the discussion, the remark of Huntingford is needless : one may equally say that these « giants » simply were not farmers ; palaeographically emendation of Frisk is not grounded either. The reading of Giangrande cannot be accepted either : ἄροτος does not mean « farmer » (ἄροτήρ), but « corn-field », « crop », « tillage », « time for harvesting » (see Liddell, Scott 1996, p. 245). Taking into consideration that the corrections of the « second hand » bear as a rule good sense (FRISK 1927, p. 29), one might suppose that the use of ὄρατοί in the fragment in question reflects the surprise of the author of the *Periplus* concerning the size of the people of Rhapta (so earlier in VANSINA 1997, p. 395 with quite uncritical argumentation : one should read ορατοί simply because this was written in the manuscript) ; this could be understood as « well visible », « conspicuous » and can be regarded as synonymous to « powerful », « important ». See quite correct translation by E. Streubel : « Dasselbst wohnen die größtgewachsenen Menschen, welche man gesehen hat » (STREUBEL 1861, p. 20). Quite the same expression was used in the description of people of India : « καὶ ἄνδρες ὑπερμεγέθεις τῷ σώματι » (41: 14. 7). The exaggerated sizes of the peoples of any distant and little known region were a characteristic feature of popular Greek thinking.

117. [...] αἱ Καλαίου λεγόμενα νῆσοι [...] πονηροὶ δὲ οἱ κατοικοῦντες αὐτὰς ἄνθρωποι καὶ ἡμέρας οὐ πολὺ τι βλέποντες (34: 11. 21-24). This fragment is normally treated so that these people suffer from any eyes' decease ; see e.g. in the very first translation of the *Periplus* by G.B. Ramusio « ... i quali di giorno non veggono molto » (RAMUSIO 1979, p. 526) or even later « ... Ihre Bewohner sind unredlich und bei Tageschau » (STREUBEL 1861, p. 25), «... and see imperfectly in the day-time » [McCRINDLE 1879, p. 137 ; FRISK 1927, p. 113-114 (suspects nyctalopia)]. See for additional details BEESTON 1981, p. 354.

that he calls them not the « pirates » but in both cases « evil men » (πονηροὶ ἄνθρωποι).

II. 1. 1. *Description of Africa in the Periplus*

The author of the *Periplus* describes the coastal line of the East Africa in the following, quite curious, way :

Καὶ σχεδὸν τελευταίωτά ἐστι ταῦτα τὰ ἐμπόρια τῆς Ἀζανίας τῆς ἐν δεξιοῖς ἂπὸ Βερνίκης ἠπείρου· ὁ γὰρ μετὰ τούτους τοὺς τόπους ὠκεανὸς ἀνερεύνητος ὢν εἰς τὴν δύσιν ἀνακάμπει καὶ τοῖς ἀπεστραμμένοις μέρεσι τῆς Αἰθιοπίας καὶ Λιβύης καὶ Ἀφρικῆς κατὰ τὸν νότον παρεκτείνων εἰς τὴν ἐσπέριον συμμίσγει θάλασσαν¹¹⁸.

It is interesting to note that the author of the *Periplus* uses the « theoretical » notion Αἰθιοπία – the product of Classical mythological geography, which has nothing to do with local East African tradition.

It is also not without interest that the author of the *Periplus* divides the modern African continent into three parts : Ethiopia, Libya and Africa, which evidently contradicts the normal division of the world in Classical geography : Libya is a continent along with Europe and Asia and not the part of any of it along with Ethiopia and Africa.

However, the division of modern Africa in three parts was not an invention of the author of the *Periplus*. Thus, Strabo clearly separates Ethiopia from Libya¹¹⁹. This division is perfectly attested in some other sources, e.g. by Pliny the Elder¹²⁰. It looks as if Strabo did not consider Ethiopia a part of Libya and that Ethiopia

It seems that the text is not to be understood literally ; it looks as if the author of the *Periplus* did not speak about the nyctalopia of the inhabitants of the islands of Kalaiou, but about the fact that they do not try to go robbing during the day, but at night. See e.g. the likely phrase : « καὶ ἐν τῷ παρά θάλασσαν περὶ αὐτὴν τὴν Ἄδουλι θεωροῦνται » [« ...sometimes they appear also along the sea by Adulis itself » (4: 2. 12-13)].

118. These are just about the very last ports of trade on the coast of Azania to the right of Berenice. For, beyond this area lies unexplored ocean that bends to the west and, extending on the south along the parts of Ethiopia and Libya and Africa that turn away, joins the western sea (18: 6. 21-25) – translation from CASSON 1989, p. 61.
119. Μετὰ δὲ τὴν Ἀσίαν ἐστὶν ἡ Λιβύη συνεχῆς οὕσα τῇ τε Αἰγύπτῳ καὶ τῇ Αἰθιοπία [« After Asia comes Libya, which is a continuation of Egypt and Ethiopia » (II. 5. 33) – translation from JONES 1997, p. 499].
120. Vgl.: *Africanam Graeci Libyam appellavere et mare ante eam Libycum. Aegyptio finitur* [« The Greeks give to Africa the name of Libya, and they call the sea lying in front of it the Libyan Sea. It is bounded by Egypt » (NH. V. I/1) – translation from RACKHAM 1961, p. 219].

belonged to none of both continents (Libya and Asia)¹²¹. Also interesting in this respect is Ptolemy's remark about the expedition of Septimius Flacchus : Σεπτίμιον μὲν Φλάκκον, τὸν ἐκ τῆς Λιβύης στρατευσάμενον, ἀφικέσθαι πρὸς τοὺς Αἰθίοπας (I. 8. 4). Though little is known about this traveler, the way Ptolemy described his adventures, based on the earlier sources, is important in itself : Septimius Flacchus departed « from Libya » and reached « Ethiopians ».

On the other hand neither Strabo nor Pliny the Elder or other sources divided modern Africa in « Ethiopia », « Libya » and « Africa ». In previous versions of triple division the place of « Africa » was given to « Egypt ».

Another point of interest is that the author of the *Periplus* calls the lands to the south of modern Somalia Azania. When he gives the theoretic division of modern Africa in three parts, the notion « Azania » falls out. Here the personal experience of the author of the *Periplus* contradicts the norms of the theoretical application he uses.

II. 1. 2. *Pontus and Caspian Sea in the Periplus*

Another fragment of the *Periplus*, where its author reveals his level of education in geography is the following one :

Κεῖται δὲ ὁ τόπος ὑπ' αὐτὴν τὴν μικρὰν ἄρκτον, λέγεται δὲ συνορ[μ]ίξειν τοῖς ἀπεστραμμένοις μέρεσιν τοῦ Πόντου καὶ τῆς Κασπίας θαλάσσης, καθ' ἣν ἢ παρακειμένη λίμνη Μαιώτις εἰς τὸν ὠκεανὸν συναναστομοῦσα¹²².

As follows from this fragment, the author of the *Periplus* thought Pontus (modern Black Sea) and Caspian Sea were bays of the Surrounding (Outer) Ocean and that Maiotis (modern Azov Sea) was connected with the Ocean. This idea of the direct connection of Pontus with the Surrounding Ocean was totally outdated in the middle of the 1st century AD, in the presumed time of life of the author of the *Periplus*.

As far as we know from Strabo (I. 2. 10), the generation of Homer regarded Pontus a part of the Outer Ocean : the sailing in Pontus was identified by them with the sailing beyond the « Pillars of Heracles ». The island Λευκίη – « Island of the blessed ones » was constantly located by the early Greek tradition on the Ocean on the way to Hades. The Ionian colonists could identify the real island in

121. See especially references to the frontiers of Libya and Ethiopia in Strabo's *Geography* as independent from the other parts of the world : ... οὐδ' ἂν ἔχοιμεν λέγειν τοὺς ὄρους οὔτε τῆς Αἰθιοπίας οὔτε τῆς Λιβύης, ἀλλ' οὐδὲ τῆς πρὸς Αἰγύπτω τρανώς [« ... neither can we tell the boundaries either of Aethiopia or of Libya, nor yet accurately even those of the country next to Egypt » (XVII. 3. 23) – translation from JONES 1996, p. 209].

122. « This area lies right under Ursa Minor and, it is said, is contiguous with the parts of the Pontus and the Caspian Sea where there parts turn off, near where Lake Maeotis, which lies parallel, along with [sc. The Caspian] empties into the ocean » (64: 21. 17-20) – translation from CASSON 1989, p. 91.

the modern Black Sea with Λευκή only if they were sure to be in the Ocean¹²³. Another tradition – that of the sailing of the Argonauts, headed by Jason, to Aeaea, also considered Pontus as a part of the Ocean¹²⁴. This idea was abandoned as soon as Greeks explored the Northern shore of modern Black Sea (middle of the 7th century BC) and could verify that Pontus was neither a part of Ocean nor was directly connected with it. At least Herodotus (III. 115; IV. 8, 16-36, 45) has abandoned the idea of the existence of the Outer Ocean itself.

The idea of direct connection of the inner seas with the Ocean was renewed after discovery of the Northern seas. So, Eratosthenes (middle of the 3rd century BC) considered Caspian Sea as a bay of the Ocean (apud Strabo. 11. 11. 6). Herodotus (Ἡ δὲ Κασπίη θάλασσα ἔστι ἐπ' ἑωυτῆς, οὐ συμμίγουσα τῇ ἑτέρῃ θαλάσῃ in I. 203) and Alexander the Great found Caspian Sea to be a closed basin (Strabo. XI. 7. 4). Strabo himself thought Caspian Sea was a bay of the Outer Ocean, while Pontus was an extension of the « Inner » / « Our » (Mediterranean) Sea (II. 4. 18, 31 ; XI. 6. 1). Pomponius Mela (I. 12 – he thought it was a bay, *sinus*) and Pliny the Elder (VI. XV/36) regarded the Caspian Sea in the same way. It was Ptolemy who fixed a newer state of knowledge (VII. 5. 4), saying that Caspian Sea was encircled by land from all sides : « Ἡ δὲ Ὑρκανία ἢ καὶ Κασπία θάλασσα πάντοθεν ὑπὸ τῆς γῆς περικέκλεισται νήσῳ κατὰ τὸ ἀντικείμενον παραπλησίως ». However, one cannot say to which time go back the data of his informants.

So, the author of the *Periplus* followed an archaic tradition, no more current in his time, about Pontus and mixed it with a younger, but also an outdated tradition about the Caspian Sea.

The inclination of the author of the *Periplus* to archaic outdated information can be also demonstrated on one more example. A textual similarity between the *Periplus* and the *Histories* of Herodotus in the description of the « war-like Bactrians » has been earlier pointed out¹²⁵ : the *Periplus* mentions μαχιμώτατων ἔθνος Βακτριανῶν (47: 16. 6). Though the reading and interpretation of this paragraph of the *Periplus* is quite problematic – different emendations have been proposed¹²⁶, one might compare this designation of the Bactrians in the *Periplus* with the following fragment of the *Histories* of Herodotus :

123. IVANTCHIK 2005, p. 77.

124. For more details see in : IVANTCHIK 2005, p. 82.

125. See Bukharin 2012 (in press).

126. For more details see BUKHARIN 2002, p. 256-261 ; BUKHARIN 2007a, p. 144-148.

Ἄλλοι δὲ τῶν Ἰνδῶν Κασπατύρω τε πόλι καὶ τῇ Πακτυϊκῇ χώρῃ εἰσὶ πρόσσοικοι, πρὸς ἄρκτου τε καὶ βορέω ἀνέμου κατοικημένοι τῶν ἄλλων Ἰνδῶν, οἱ Βακτρίοισι παραπλησίην ἔχουσι δίαιταν. Οὗτοι καὶ μαχιμώτατοί εἰσι Ἰνδῶν¹²⁷.

It is quite possible that the designation of the Bactrians as the most warlike nation in the *Periplus* does not go back to the personal experience of its unknown author or his informants, but to Herodotus (maybe not directly).

II. 2. Εὐδαίμων Ἀραβία. The Periplus and the Roman Imperial propaganda

The *Periplus* is the only source which mentions the port under the name Εὐδαίμων Ἀραβία. The singularity of such information drew considerable attention to the origin of the name. As follows from the account of the author of the *Periplus*, this port, lying immediately after the exit from the straits of modern Bāb al-Mandab, was sacked by an unnamed Caesar :

Μετὰ δὲ Ὅκηλιν [...] ἐστὶν Εὐδαίμων Ἀραβία, κώμη παραθαλάσσιος, βασιλείας τῆς αὐτῆς Χαριβαήλ. [...] εὐδαίμων δὲ ἐπεκλήθη, πρότερον οὔσα πόλις, ὅτε, μήπω ἀπὸ τῆς Ἰνδικῆς εἰς τὴν Αἴγυπτον ἐρχομένων μηδὲ ἀπὸ Αἰγύπτου τολμώντων εἰς τοὺς ἔσω τόπους διαίρειν ἀλλ' ἄχρι ταύτης παραγινομένων, τοὺς παρὰ ἀμφοτέρων φόρτους ἀπεδέχετο, ὡσπερ Ἀλεξάνδρεια καὶ τῶν ἔξωθεν καὶ τῶν ἀπὸ τῆς Αἰγύπτου φερομένων ἀποδέχεται. Νῦν δὲ οὐ πρὸ πολλοῦ τῶν ἡμετέρων χρόνων Καῖσαρ αὐτὴν κατεστρέψατο¹²⁸.

The best known event in the political life of the Roman Empire of the 1st century BC connected with Arabia was the campaign of the Romans against South Arabia from spring–summer 26 until August 25 BC under the command of Aelius Gallus¹²⁹. It is described in the sources quite in detail¹³⁰. Namely with these combat

127. « Other Indians dwell near the town of Caspatyrus and the Pactic country, north of the rest of India ; these live like the Bactrians ; they are of all Indians the most warlike » (III. 102. 1) – translation from GODLEY 1921, p. 129.

128. « Beyond Okelis [...] is Eudaimôn Arabia, a village on the coast belonging to the same kingdom, Charibaël's. Eudaimôn Arabia [« prosperous Arabia »], a full-fledged city in the earlier days, was called Eudaimôn when, since vessels from India did not go on to Egypt and those from Egypt did not dare sail to the places further on but came only this far, it used to receive the cargoes of both, just as Alexandria receives cargoes from overseas as well as from Egypt. And now, not long before our time, Caesar sacked it » (26: 8. 21-32) – translation from CASSON 1989, p. 65.

129. JAMESON 1968, p. 77. According to another view, the campaign took place in winter 25-24 BC (GLASER 1890, p. 44, 233 ; LUTHER 1999, p. 164, 167).

130. Strabo. XVI. 4. 22-24 ; *Res Gestae* 5. 26 ; Plin. VI. XXXII/160 ; Dio. Cass. 53. 29. 3-8 ; Ios. Fl. *Antt.* 15. 317.

actions is connected the « destruction » of the port of Eudaimon Arabia, supposed in the *Periplus*¹³¹.

According to the other views, this fragment of the *Periplus* reflects the campaign of a local ruler against 'Aden (ΕΛΙΣΑΡ¹³² or Charibael¹³³ or any of them¹³⁴) or that of some Roman emperor. The following names were referred to in this connection : Caius Caesar in 1 AD¹³⁵ ; Augustus¹³⁶, Claudius¹³⁷, Nero¹³⁸, Claudius or Nero¹³⁹. It was also supposed to have reflected the campaign of Caracalla under Septimius Severus in 196-198 AD¹⁴⁰ or a description if not of a destruction, at least that of « establishment of the dependence of this port from Romans », which included besides military operations introduction of high customs fees¹⁴¹.

The port of Arabia Eudaimon was also said to have been destructed by the fleet of Aelius Gallus in the Southern Red Sea. The aim of his operations was to weaken the power of the 'Adanī pirates¹⁴² and that of South Arabian monopolist

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131. WELLESLEY 1954, p. 401-405 ; RYCKMANS 1957, p. 81 ; SCHWARTZ 1960, p. 24 ; WAGNER 1976, p. 280 ; RASCHKE 1978, p. 647, 872-873. n. 909-912.
132. MÜLLER 1855, p. 277 ; BUNBURY 1879, p. 478 ; FABRICIUS 1883, p. 64 ; GROOM 1995, p. 183-184.
133. GLASER 1890, p. 171 ; SCHOFF 1912, p. 115-116 ; BOWEN 1958, p. 38.
134. SIDEBOTHAM 1986b, p. 130-131 (three names were proposed : Charibael, Eleazus/Elisar).
135. MOMMSEN 1885, p. 611-612 (n. 2) ; THORLEY 1969, p. 213 (n. 1) : operations of the fleet of Caius Caesar (from the other side, the author is ready to support reading ΕΛΙΣΑΡ instead of ΚΑΙΣΑΡ) ; EGGERMONT 1988, p. 361.
136. KRÜGER 1862, *passim* ; GLASER 1890, p. 43-61 ; WARMINGTON 1928, p. 15 ; LAMOTTE 1953, p. 101 (in 25 and 1 BC) ; DIHLE 1965, p. 22-24 ; MILLER 1969, p. 15.
137. ROSTOVITZEW 1908, p. 309 ; LEIDER 1934, p. 54 ; HOURANI 1951, p. 31.
138. KORNEMANN 1921, p. 61 (n. 4), 63 ; SCHUR 1923, p. 46 ; SCHUR 1926, p. 222 ; ALTHEIM, STIEHL 1961, p. 247.
139. KENNEDY 1916, p. 834.
140. REINAUD 1864b, p. 241 ; ALTHEIM, STIEHL 1964, p. 44 ; this theory was sharply criticized by A. Dihle (DIHLE 1965, p. 23-24) and especially by M.G. RASCHKE (RASCHKE 1978, p. 873, n. 912).
141. ROSTOVITZEFF 1907, p. 402.
142. KENNEDY 1916, p. 834.

sea-traders, who controlled the trade routes to India¹⁴³. However **no source** mentions use of fleet by Aelius Gallus to the south of Leuke Kome. The traditional treatment of the description of this port in the *Periplus* as « sea-side village, which earlier was a town » is reduced to the following : the port suffered period of decline after the destruction, and its place in the system of trade relations was taken by Muza. The state of village and former town is explained by its recent destruction by « Caesar ».

It seems that Augustus has to be seen in the unnamed « Caesar », mentioned in the *Periplus*, and Augustus' *Res Gestae* may speak in favour of that¹⁴⁴. At least this is the only source, whose information could be directly connected with the fragment of the *Periplus* in question : Augustus himself mentioned sending troops against *Arabia Felix* and the defeat of enemies. The campaign of August against the Sabaeans (the campaign of Aelius Gallus is evidently meant) was mentioned by Virgil (*Aeneis*. 7. 605) and Horace (I. 29. 1-3). However, the sources, which describe this campaign (unsuccessful in general for the Romans), do not mention Arabia Eudaimon among the places taken by the Romans.

Another military campaign against Arabia during Augustus' reign is mentioned in inscriptions from Pisa¹⁴⁵ and Messena¹⁴⁶ as well as by Pliny the Elder (VI. XXXI/141 ; XII. XXXI/55). Based on these quotations, some thought that Caius Caesar was the field commander who led the Romans against Arabia. However these sources do not give the exact location of the combat actions and

143. ROSTOVITZEFF 1926, p. 66 ; SARASIN 1930, p. 17 ; LEIDER 1934, p. 54 ; SCHWARTZ 1960, p. 23-24 ; VON WISSMANN 1964, p. 74-75 (« So bleibt, wenn man wirklich das Wort καῖσαρ des Periplus auf einen Herrscher des Römerreiches bezieht und nicht an eine Verballhornung denkt, wie man oft getan hat [...], nur die Möglichkeit eines Strafüberfalls einer im Indischen Ozean fahrenden römischen Flotte, die merkwürdigerweise vom "καῖσαρ" geführt wurde, auf 'Aden. [...] Der Sinn des καῖσαρ-Satzes bleibt weiterhin dunkel ») ; JAMESON 1968, p. 80 ; LUTHER 1999, p. 168.

144. *Meo iussu et auspicio ducti sunt exercitus eodem fere tempore in Aethiopiam et in Arabiam quae appellatur Eudaemon* [« At my command and under my auspices two armies were led almost at the same time into Ethiopia and Arabia Felix » (*Res Gestae* 5. 26) – translation from BRUNT, MOORE 1969, p. 33].

145. *C. Caesarem quem ultra finis extremas populi Romani bellum gerens...* [« Caius Caesar, who waged war beyond the most remote frontiers of the Roman people ... » (*CIL* XI. 1421 = *ILS* 140/9-10)]

146. Γάϊον [...] τοῖς βαρβάροις μαχόμενον ὑγιαίνειν τε καὶ κινδύνους ἐκφυγόντα ἀντιτετιμωρήσθαι τοὺς πολεμίους [« Gaius [...] remained safe and sound, struggling with the Barbarians, and, having escaped the dangers, took vengeance on the enemies » (*SEG* 23, 206 = *AE* 1967, 458)].

Pliny the Elder says that Caius Caesar saw Arabia « from far »¹⁴⁷. Absolutely nothing is known about the fleet¹⁴⁸ under his command.

It is worth pointing out that the notion *Arabia* in the Roman geography designated not the South of the Arabian Peninsula, but its North-West and West (see above I. 2). From another point of view Ἀραβία Εὐδαίμων referred in Strabo not to a single port, but the entire Southern part of Arabia¹⁴⁹. In the same way Augustus and Pliny the Elder meant that the territory conquered by Aelius Gallus Ἀραβία Εὐδαίμων was a region – the Southern part of Arabian Peninsula¹⁵⁰.

In this connection the following explanation of the appearance of the legend about the destruction of the port of Εὐδαίμων Ἀραβία by some Caesar in the *Periplus* could be proposed. The campaign of Aelius Gallus, as follows from *Res Gestae*, could hardly be perceived in Rome as misfortune¹⁵¹. The author of the *Periplus* surely heard of such a campaign and of its aim (Εὐδαίμων Ἀραβία), maybe from sources similar to *Res gestae*. However, he knew from his personal experience Εὐδαίμων Ἀραβία not as a region but as a port on the shore of the Bay of 'Aden. He applied his information about the campaign of Aelius Gallus against Εὐδαίμων Ἀραβία to a single port. That is why the translations based on the idea of destruction of Εὐδαίμων Ἀραβία¹⁵² are not correct.

Ptolemy continues mentioning Ἀραβίας ἐμπόριον (51; VI. 7. 9) in the middle of the 2nd century AD, which is located on his map right on the place of Εὐδαίμων Ἀραβία of the *Periplus* and somewhere at the site of modern 'Aden: this name is first mentioned in the ASA inscription MAFRAY-al-Mi'sāl 5/12-20 (*hyqn/d'dnm*; 272-273 AD) and by Philostorgius (*Hist. Eccl.* III. 4) in the story of Theophilus the Indian, related in the 4th century, as *Roman Emporium* (τὸ Ῥωμαϊκὸν ἐμπόριον). This information of written sources, combined with the find in al-Mazariba by

147. ... *nam C. Caesar Augusti filius prospexit tantum Arabiam* [« ... for Caius Caesar son of Augustus only had a glimpse of Arabia » (NH. VI. XXXII/160) – translation from RACKHAM 1961, p. 459] ; cf. the view that *expeditio Arabica* of Caius Caesar was a punitive action against the inhabitants of the shore of Northern Arabia (LUTHER 1999, p. 175).

148. As supposed in SIRAGO 2000, p. 241-242.

149. 15. 2. 14 ; 16. 1. 28, 2. 20, 3. 1, 6, 4. 21, 25 ; 17. 1. 53.

150. RETSÖ 2000, p. 191. According to another view Strabo meant by « Arabia Felix » not the entire Arabian Peninsula, but the part of it which lay to the south of the nomads (MACADAM 1989, p. 298).

151. BOWERSOCK 1997, p. 551-553.

152. I.e. not a simple subjugation, e.g. : « ... but not long before our own time Charibael destroyed the place » (SCHOFF 1912, p. 32) ; « not long before our time Caesar destroyed it » (HUNTINGFORD 1980, p. 35) ; « ... not long before our time Caesar sacked it » (CASSON 1989, p. 65).

‘Aden of the mixed Roman-Aksumite hoard of coins issued in 350-376¹⁵³, confirm that ‘Aden was not in ruins and continued functioning as an important port of trade.

One might conclude that the author of the *Periplus* was quite an informed person, who had access to the royal propaganda. From the other hand, the information, taken from this propaganda, has been totally misapplied.

In connection with the precedent paragraph one may point out the quite wide political horizon of the author of the *Periplus* : he knows the roads to three capitals of the kingdoms of South Arabia : Sawwā’, Ḍafār and Šabwa (however, he knows neither the capital of Qatabān, nor that of ‘Awsān ; he also knows the capital of Axum and the capitals of Indian kingdoms), he knows the names of all the three living kings of South Arabia, whose kingdoms were mentioned in the *Periplus* (as well as the names of the kings of Axum and Western India ; however he does not give the names of the Parthian kings), though he does not give the local name of the kingdom of Ḥaḍramawt. He even knows the status of the kings of Ḍafār vis-à-vis Roman Emperors.

He knows the situation on Suqutrā’, though this island was closed for the foreigners and was well guarded. So, one may see that the author of the *Periplus* was well informed of the political situation in the basin of the Erythraean sea. From this point of view he had to be quite an important person.

In the light of the supposed functioning of the « Incense Road » through Ḥimyar (see above I. 3. 3) and with the expedition of Aelius Gallus it is interesting to mark out that the king of Saba’ and ḍū-Raydān (*mlk/sb’/wdrydn*) was called in the *Periplus* an « ἔνθεσμος βασιλεύς » (« legal king ») and « φίλος τῶν αὐτοκρατόρων » (« friend of the Emperors »). He gained this status thanks to the « συνεχῆσι πρεσβείαις καὶ δώροις » (« constant embassies and gifts ») (23: 7. 29).

The designation « ἔνθεσμος » points to the necessity to confirm and recognize Charibael as a legal king by superior monarchs. The use of the designation « φίλος τῶν αὐτοκρατόρων » must go back to the beginnings of the Hellenistic period, when some of the court elite were appointed « φίλοι τοῦ βασιλέως ». The designation « φίλος τῶν αὐτοκρατόρων » has an interesting parallel : when Pontius Pilatus wanted to set Jesus Christ free, the Jewish aldermen doubted if he remained φίλος τοῦ Καίσαρος (In. 19. 12).

Pliny the Elder also gives some direct and indirect testimonies about the embassies from Arabia to Roman Emperors¹⁵⁴. *Legati Arabum* are mentioned also

153. MUNRO-HAY 1989, p. 83-100.

154. *Procerissimum hominum aetas nostra Divo Claudio principe Gabbaram nomine ex Arabia advectum ... vidit* [« The tallest person our age has seen was a man named Gabbara brought from Arabia in the principate of His late Majesty Claudius » (VII. XVI/74) translation from RACKHAM 1961, p. 555] ; *Qui mea aetate legati ex Arabia venerant [...], virgīs etiam turis ad nos commeantibus [...]* [« The ambassadors who have come to Rome from Arabia in my time [...], some springs even of the incense-

in another fragment (VI. XXXI/140). The continuation of such embassies and gifts in the middle of the 2nd century is confirmed by Phlegon (*FGrHist.* 257 F 36. 545-557).

These gifts are nothing more than the tribute paid by Ḥimyar to Rome¹⁵⁵ and point to the subordination (at least, nominal) of the kings of Saba' and dū-Raydān to Rome. Necessity to pay tribute to Rome and wish to take part in the trade in incenses pushed Ḥimyar to fight for control over the trade-routes. The vessels that kings of Ḥimyar could hire at Muza were appropriate only for the coastal trade, since they were not large enough to sail in the open sea (19: 6. 31 ; 57: 19. 1) and the caravan trade remained the safest way to deliver the goods to Mediterranean.

The possible, at least declarative, dependence of South Arabian kings on Rome, supposed by being designated as ἔνθεσμος βασιλεύς, can also be seen in the account of Strabo :

Πρῶτοι δ' ὑπὲρ τῆς Συρίας Ναβαταῖοι καὶ Σαβαῖοι τὴν εὐδαίμονα Ἀραβίαν νέμονται, καὶ πολλάκις κατέτρεχον αὐτῆς πρὶν ἢ Ῥωμαίων γενέσθαι νῦν δὲ κάκεινοι Ῥωμαίοις εἰσὶν ὑπήκοοι καὶ Σύροι¹⁵⁶.

Since the Syrians are pointed out separately, the Nabataeans and Sabaeans had to be regarded in this fragment as ὑπήκοοι.

II. 3. « Arabia the First »

Seemingly the author of the *Periplus* used a kind of slang, which could be seen in the expression « the kingdom of the former Arabia the First ». It looks like a name of Roman province. However, there is no indication of the existence of a province *Arabia prima* or *secunda*. The reference to the « kingdom » of the former « Arabia the First » seems to occur nowhere else in the Classical sources – neither in the narrative ones, nor in the papyri or inscriptions. Its nature remains unexplained.

According to the *Periplus* Azania (South-East Africa to the south of Somalia) belonged at that time to the king of Saba' and dū-Raydān and tyrant of Ma'āfir : Ὑποπίπτει μὲν οὖν, ὥσπερ ἡ Ἀζανία Χαριβαήλ καὶ τῷ Μαφαρίτῃ τυράννῳ (31: 10. 19-20). In another fragment the author of the *Periplus* says that Azania was

tree find their way to Rome [...] » (XII. XXXI/57) – translation from RACKHAM 1960, p. 41].

155. S. Sidebotham is of opinion that the aims of these gifts are unclear (SIDEBOTHAM 1986a, p. 599).

156. « The first people above Syria who dwell in Arabia Felix are the Nabataeans and the Sabaeans. They often overran Syria. Before they became subject to the Romans ; but at present both they and the Syrians are subject to the Romans » (XVI. 4. 21) – translation from JONES 1930, p. 351.

subdued to the tyrant of Ma'āfir only and that the merchants of Muza held it through a grant of the « king » :

« Νέμεται δὲ αὐτήν, κατὰ τι δίκαιον ἀρχαῖον ὑποπίπτουσιν τῇ βασιλείᾳ τῆς πρώτης γενομένης Ἀραβίας, ὁ Μοφαρίτης τύραννος. Παρὰ δὲ τοῦ βασιλέως ὑπόφορον αὐτήν ἔχουσιν οἱ ἀπὸ Μούζα [...] »¹⁵⁷.

Here under the « former Arabia the First » seemingly the kingdom of Sabaeans and Homerites is to be meant, since the ruler of Ma'āfir was constantly called a « tyrant » and not a « king » and he was subdued to the king of Sabaeans and Homerites.

A.F.L. Beeston was the only one to deny the identification of the « king » in this fragment with the king of Saba' and dū-Raydān. Beeston thought this king was to be identified with the king of Qatabān, which dominated on the borders of the Red Sea in the 4th–2nd centuries BC¹⁵⁸. The reference to some **ancient right** makes this explanation seem even more plausible, though neither right itself, nor the name of the kingdom was referred to by the author of the *Periplus*. Qatabān dominated on the Bāb al-Mandab and the tyrant of Ma'āfir could inherit this power. Since it is subdued to the king of the Sabaeans and Homerites, he in his turn became supreme ruler over the possessions of Ma'āfir.

However the interpretations « under some ancient right that subjects it to the sovereignty of the state that is become first in Arabia »¹⁵⁹ and « since by some ancient right it is subject to the kingdom of Arabia as first constituted »¹⁶⁰ drop no light on the nature of « priority » of Arabia.

Some scholars thought that « priority » in this case was rather geographic : earlier, the first port of Arabia which the merchants met was Eudaimon Arabia ('Aden), and then, with the growth of Muza, 'Aden became Arabia II¹⁶¹. This interpretation was supported by H. Frisk¹⁶². However, this is totally wrong : the author of the *Periplus* reports of the kingdom of the « former Arabia the First ». Kingdom of a port is an impossible construction.

157. « The region is under the rule of the governor of Mapharitis, since by some ancient right it is subject to the kingdom of Arabia as first constituted. The merchants of Muza hold it through a grant from the king [...] » (16: 6. 9–10) – translation from CASSON 1989, p. 61 ; the text of the London manuscript of the *Periplus* is a little different here : « Νέμεται δὲ αὐτήν, κατὰ τι δίκαιον ἀρχαῖον ὑποπίπτουσιν τῇ βασιλείᾳ τῆς πρώτης Ἀραβίας γενομένης, ὁ Μοφαρείτης τύραννος ».

158. BEESTON 1990, p. 128–129.

159. SCHOFF 1912, p. 28.

160. CASSON 1989, p. 61.

161. SPRENGER 1875, p. 255 ; DILLMANN 1880, p. 425.

162. FRISK 1927, p. 109.

J. Kennedy found it « unclear » : « ... At first sight we naturally incline to interpret the words the « First Arabia » as a geographical expression ... the word γινομένης implies that the Homerites had risen to the hegemony of Southern Arabia no very long time before the days of the *Periplus*. But the expression is obscure »¹⁶³.

It is hardly possible that ἡ πρώτη γενομένη Ἀραβία makes geographic sense. In each case of designating Arabia as a geographic notion the author of the *Periplus* writes Ἀραβική χώρα. The only cases when he writes Ἀραβία are references to the port of Εὐδαίμων Ἀραβία. It is also difficult to imagine how it was possible to lose geographic priority and to become « formerly the first ». What was then Arabia the Second ?

It really seems that until a better explanation is found the « priority » of former Arabia the First is to be explained as reference to its political domination. The author has evidently forgotten or did not know the name of the kingdom and used such a general, though quite awkward, notion.

II. 4. *Periplus* and previous tradition : the capital of Saba'

As was earlier pointed out, the author of the *Periplus* in some cases used previous tradition : the description of the port Ptolemais of the Hunts goes back to the data of the Hellenistic times of the elephant hunt; also the use of Hellenistic cartography can be traced back in the description of the Nabataea¹⁶⁴. From the other side, the author of the *Periplus* seems to have totally ignored previous Classical geographic and political traditions, at least concerning some regions of the Red Sea basin. Let us consider some more examples in this respect.

The author of the *Periplus* describes the state of Saba' and *qū-Raydān*. He knows not only the fact that the kings of the most powerful state of South Arabia of that time pretended on the control over two people, he renders the names of the people, those of the king and of the capital in a correct way : Καὶ μετ' ἄλλας ἑννέα ἡμέρας Σαφάρ μητρόπολις, ἐν ἧ Ἰ Χαριβαήλ, ἕνθεσμος βασιλεὺς ἔθνῶν δύο, τοῦ τε Ὀμηρίτου καὶ τοῦ παρακειμένου λεγομένου Σαβαΐτου, συνεχέσι πρεσβείαις καὶ δώροις φίλος τῶν αὐτοκρατόρων¹⁶⁵.

163. KENNEDY 1916, p. 832.

164. BUKHARIN 2011, p. 219-231 ; BUKHARIN 2012 in press.

165. « Nine days further inland from Muza lies Saphar, the metropolis, residence of Charibaël, legitimate king of two nations, the Homerite and the one, lying next to it, called the Sabaeen ; he is a friend of the emperors, thanks to continuous embassies and gifts » (23: 7. 23-29) – translation from CASSON 1989, p. 63.

Quite different things in this respect are reported by Agatharchides of Cnidus¹⁶⁶ and Pliny the Elder¹⁶⁷. The origin of such a name-giving for the capital of Saba' by these two writers must be searched for in the following. According to Pliny the Elder, the *Atramitae* (people of Ḥaḍramawt) were a community of the Sabaeans. The name of the capital of *Atramitae* (Ḥaḍramawt) is given as *Sabota*, which quite in a right way reproduces ASA ŠBWT (Šabwa) – the name of the capital of Ḥaḍramawt. The name of *Sabota* was compared with the name of the people itself (*Sabaei*). As a result, *Sabota* – the presumed name of the capital of the Sabaeans – was deduced from the name of the people. From there, the name of the capital of Saba' in the work of Agatharchides became Σάβας.

As one might see, the author of the *Periplus* is free from any dependence on the previous chorographic tradition, if it concerns description of the political realities.

II. 5. Νῆσοι Ἀλαλαίου λεγόμενοι

The *Periplus* also mentions νῆσοι Ἀλαλαίου λεγόμενοι (4. 2: 13-14). This name comes from 'l (« god »), plur. – 'l't and thus seems to be identical to Δαιμόνων νῆσος mentioned by Ptolemy (277 ; VI. 7. 43). This name was earlier rendered by Strabo as Ἐλαία (Strabo. XVI. 4. 8), then by Pliny the Elder as *insulae Alaea* (NH. VI. XXXII/150) and *insulae quae Aliaeu vocantur* (NH. VI. XXXIV/173). The name Δαιμόνων, given by Ptolemy, is a translation of a local name, while the others render into Greek the local pronunciation.

According to the *Periplus*, the islands of Ἀλαλαίου are located to the south of Adulis¹⁶⁸ and thus can be identified with the modern islands Huwākil and Baka. If so, these two islands seem to correspond to the islands of *Bachhias* and

166. Τὸ δὲ τῶν Σαβαίων ἄστρῳ τοῦ παντὸς ἔθνους προσηγορίαν δηλοῦν, ἐπ' ὄρους ἐστὶν οὐ μέγαλου, πολὺ κάλλιστον τῶν κατὰ τὴν Ἀραβίαν, ὃ καλεῖται Σάβας [« The city of the Sabaeans bears the name of the whole nation and is situated on a small mountain. This city, which is called Sabas is far the most beautiful of those in Arabia » (102a) – translation from BURSTEIN 1989, p. 165].

167. [...] *tura praeter Arabiam nullis ac ne Arabiae quidem universae. in medio eius fere sunt Atramitae, pagus Sabaeorum capite regni Sabota in monte excelso, a quo octo mansionibus distat regio eorum turifera Sariba appellata ; hoc significare Graeci mysterium dicunt* [« ... no country besides Arabia produces frankincense, and not even the whole of Arabia. About in the middle of that country are the Atramitae, a district of the Sabaei, the capital of their realm being Sabota, situated on a lofty mountain ; and eight days' journey from Sabota is a frankincense-producing district belonging to the Sabaei called Sariba according to the Greeks the name means 'secret mystery' » (NH. XII. XXX/52) – translation from РАСКНАМ 1960, p. 37.

168. Πρόκεινται δὲ τοῦ ἐμπορίου καὶ κατὰ πέλαγος ἄλλαι νῆσοι μικραὶ ἐκ δεξιῶν [« In front of this port of trade, that is, towards the open sea, on the right are a number of other islands, small and sandy, called Alalaiu » (PME. 4. 2: 13-14) – translation from CASSON 1989, p. 53].

Antibacchias of other ancient geographers (Plin. *NH.* VI. XXXIV/173) / Βάκχου καὶ Ἀντιβάκχου (Ptol. *Geogr.* IV. 8. 38). The local name Baka gave birth to Latin *Bacchus*, which, accompanied with Huwākīl / *Antibacchias*, could be compared with the Greek Δαιμόνων.

One might see from these two examples that Ptolemy used other sources of information than the *Periplus*. Its author, though well aware of geography in the Southern Red Sea, was not known in the scientific milieu of Roman Egypt in the middle of the 2nd century AD.

II. 6. The ways of rendering local names

The author of the *Periplus* renders local names, in particular those of the islands, in the Red-Sea and adjacent basins without any system. Some names are left in their local form, and in contrast to Indian names, are never declined (i.g. Κανή), others were translated, such as Κατακεκαυμένη.

One may easily see that the author of the *Periplus* limits himself by mentioning only the most important orientation points in the Southern Red Sea basin. Such was the island Diodoros and the water station Okelis, which had to mark out the exit from the modern Red Sea. So, he marks out as the Southern frontier of dangerous fragment of sailing in the Red Sea the « Burnt Island » :

« Διὸ καὶ εἰσπλέοντων <τὸν> μέσον πλοῦν κατέχομεν εἰς τὴν Ἀραβικὴν χώραν <καὶ> μᾶλλον παροξύνομεν ἄχρι τῆς Κατακεκαυμένης νήσου, μεθ' ἣν εὐθέως ἡμέρων ἀνθρώπων καὶ νομαδιαίων θρεμμάτων καὶ καμήλων συνεχεῖς <χώραι> »¹⁶⁹.

The island Κατακεκαυμένη was also put on the map by Ptolemy (283 ; VI. 7. 44). The most widespread identification of the « Burnt Island » is with modern Ġabal at-Ṭā'ir¹⁷⁰ (17°70'N, 41°74'E), though this identification was normally given at random without enquiry into the history of the Greek name. The latter seems to be connected with the volcanic activity in the region. There are two volcanoes known in the Southern Red Sea : Ġabal at-Ṭā'ir (last eruption in 1883 and 2007) and Ġabal Zubayr (last eruption in 1824 or in 1846 [?]). According

169. « This is why, when sailing down this sea, we set a course for Arabia down the middle and put on extra speed as far as Katakekaumenê [‘burnt’] Island, immediately beyond which there is a succession of shores with peaceful inhabitants, animals at pasture, and camels » (20: 7. 14-17) translation from CASSON 1989, p. 63.

170. Previous identifications : Ġabal at-Ṭā'ir (MÜLLER 1855, p. 273 ; SCHOFF 1912, p. 106 ; BEESTON 1981, p. 356 ; Groom 1981, p. 244, n. 18 ; CASSON 1989, p. 147 ; VILLENEUVE, PHILIPPS, FACEY 2004, p. 145, n. 12 ; BUKHARIN 2007a, p. 232) ; Ḥanīš al-Kabīr (VILLENEUVE, PHILIPPS, FACEY 2004, p. 159, n. 82). The islands Ḥanīš al-Kabīr and Ḥanīš aš-Ṣaġīr to be identified with the island *Citis* (Plin. *NH.* VI. XXXIII/170). *Citis* seems to be a corrupted form of *Echitis*, which goes back to the Greek ἔχις (« viper ») ; the Arab name of the islands Ḥanīš goes back to the Arab *ḥanaš* with the same meaning.

to ad-Dimašqī (K. Nuḥbat. 163) and al-Qazwīnī (K. 'aḡā'ib. 120), the name *muḥtaraqa* (« burnt ») was connected with a comet, regularly flying over the island. This perfectly corresponds to the name of (Ġabal) at-Ṭā'ir (« flying »). Probably namely this island was mentioned by Pliny the Elder as *Exusta* (NH. VI. XXXIV/175).

Other names are rendered in local pronunciation. The *Periplus* says that the western frontier of Persia was formed by the islands Ζηνοβίου – modern Kuria-Muria (33: 11. 10-12). The Greek Ζηνοβίου can be compared with Arab. *sabba* (« seven ») and MSA analogies with *bb > nb : z* in all MSA languages corresponds to Arab *s*. This identification is confirmed by the fact, that there are also seven islands in the group of Kuria-Muria.

There are also renderings which demonstrate pure *Interpretatio Graeca* of a local name. Such is the name of the island Σάραπτις (33: 11. 13).

The name Μόσχα λίμην in spite of earlier treatment as a purely Greek designation of a colony of Šabwa – « offspring » or that of the form of the lagoon¹⁷¹, is rather a Greek rendering of a local name which consisted of a name like *sāhil* – « coast », *saḥiliyya* – « coastal », *musāhala* – « coastal sailing ».

III. Transoceanic navigation in the *Periplus*

The *Periplus* described the navigation between South Arabia, East Africa and India in historical retrospect in the following way :

Τοῦτον δὲ ὅλον τὸν εἰρημένον περίπλου ἀπὸ Κανῆς καὶ τῆς Εὐδαίμονος Ἀραβίας οἱ μὲν <πρότεροι> μικροτέροις πλοίοις περικολπίζοντες ἔπλεον, πρῶτος δὲ Ἴππαλος κυβερνήτης, κατανοήσας τὴν θέσιν τῶν ἐμπορίων καὶ τὸ σχῆμα τῆς θαλάσσης, τὸν διὰ πελάγους ἐξεῦρε πλοῦν. [...] Ἄφ' οὗ μέχρι καὶ νῦν τινὲς μὲν εὐθὺς ἀπὸ Κανῆ, τινὲς δὲ ἀπὸ τῶν Ἀρωμάτων ἀφιέντες, οἱ μὲν εἰς Λιμυρικὴν πλέοντες ἐπὶ πλείον τραχηλίζοντες, οἱ δὲ εἰς Βαρύγαζα οἱ τε εἰς Σκυθίαν οὐ πλείον ἢ τρεῖς ἡμέρας ἀντέχουσι καὶ τὸ λοιπὸν παρεπιφέρων πρὸς ἴδιον δρόμον ἐκ τῆς χώρας ὑψηλοὶ διὰ τοῦ ἕξωθεν γῆς παραπλεύουσι τοὺς προειρημένους κόλπους¹⁷².

171. BUKHARIN 2002, p. 323-324.

172. « The whole coastal line just described, from Kanê and Eudaimôn Arabia, men formerly used to sail over in smaller vessels, following the curves of the bays. The ship captain Hippalos, by plotting the location of the ports of trade and the configuration of the sea, was the first to discover the route over open water... Because of this, right up to the present, some leave directly from Kanê and some of the Promontory of Species, and whoever are bound for Limyrikê hold out with the wind on the quarter for the most of the way, but whoever are bound for Barygaza and whoever for Scythia only three days and no more, and, carried along (?) the rest of the run on their own proper course, away from the shore on the high seas, over the [? ocean] off the land, they bypass the aforementioned bays » (57. 18. 30 – 19. 12) – translation from CASSON 1989, p. 85, 87.

III. 1. The Monsoons

It is often thought that the most important factor of the development of the navigation between Arabia and India was the discovery and use of the monsoons¹⁷³. This opinion is practically as old as the references to the *Periplus* in the relevant research-works¹⁷⁴.

The historians of navigation discuss the probability of knowledge of the monsoons by the Phoenician, Arab, East African and Indian mariners since about 200 years. Some say that the Indians could use the monsoons already in early Biblical times¹⁷⁵; others that the Arabs used the monsoons in the time of king Salomon¹⁷⁶.

Now the argumentation is not so naïve as 200 years ago (e.g. « Indians did not have the caste of mariners »¹⁷⁷), however the prosperity of coastal India is linked with the knowledge and use of the north-east (winter) monsoon¹⁷⁸. It is also stressed that inhabitants of Arabia did not possess ships large enough to reach India¹⁷⁹. « Neither archaeological nor written sources point to the use of the ships, fitting for the coastal or even for oceanic navigation, by South Arabians »¹⁸⁰.

173 E.g. : « What made both routes possible were the monsoons, the winds of the Arabian Sea and western Indian Ocean that blow from the northeast during the winter months and then conveniently switch to the southwest during the summer » CASSON 1989, p. 283.

174. LETRONNE 1818, p. 406 ; VON HUMBOLDT 1847, p. 153-154 (Ann. 21) ; REINAUD 1861, p. 237-238 ; REINAUD 1864a, p. 215 ; DE SAINT-MARTIN 1873, p. 188 ; BUNBURY 1879, p. 445 ; MOOKERJI 1912, p. 86 ; OTTO 1913, p. 1661 ; RAWLINSON 1916, p. 109-110 ; CHARLESWORTH 1924, p. 60 ; WARMINGTON 1928, p. 9-10, 16, 38, 42-44, 46-47 etc ; BERTHELOT 1930, p. 328 ; HENNING 1944, p. 280-281 (though Henning is ready to accept that Hippalos was not a discoverer but a re-discoverer of the monsoons and was a pioneer in their systematic use. This is not a new idea. Chr. Lassen already considered Hippalos a rediscoverer of the monsoons, which were known much earlier to the Phoenicians – LASSEN 1857, p. 3, 57) ; HYDE 1947, p. 205 ; RASCHKE 1978, p. 661 ; ALBRIGHT 1982, p. 50 ; CASSON 1989, p. 224 ; SIDEBOTHAM 1986b, p. 8 ; NAGASWAMI 1995, p. 77 ; SALLES 1996, p. 252 ; KRISHNAMURTHY 1996, p. 10 (here even the date of the discovery about 45 AD is given).

175. BURNES 1836, p. 28.

176. DICKINSON 1835, p. 114-115.

177. DICKINSON 1835, p. 115.

178. PIRENNE 1970, p. 102-104.

179. EADIE 1989, p. 116.

180. AMIRKHANOV, NAUMKIN, PIOTROVSKIY, SEDOV 2002, p. 168.

There is another viewpoint : the direct sea-way between Red Sea, India and Far East is either traceable in Early Ptolemaic times¹⁸¹, or even much older¹⁸².

Some scholars (as M.G. Raschke) leave the question of the pre-Greek use of the monsoon open. On the other hand Raschke remarks that the existence of the monsoons does not mean their use (to complete this sentence – not only the existence, but also the knowledge of them). There is no argument for proving the use of the southwest monsoons by Indian or Arabian sea-traders before establishment of the domination of Roman Egypt on the trade-routes to India¹⁸³.

Concerning the pre-Greek use of the monsoons, priority should be given to Indian mariners : the *Periplus* reports of Indian traders on Suqūṭrā' (30: 10. 10) – it is hardly possible to reach Suqūṭrā' following the coastal line. Information on the periodicity of the ocean winds was received already by the naval commanders of Alexander the Great (Arr. *Anab.* VI. 21. 2). South Arabian sea-traders could reach the port of Omana, which lay in the Persian Gulf (36: 12. 8). However, these goals could be reached, curving the coastal line. Namely this was said by the author of the *Periplus* : formerly the seamen used to sail over in smaller vessels, following the curves of the bays (57. 18. 30 ; 19. 2). Nothing is said about the winds.

Some of the researchers think that Hippalos mentioned in the *Periplus* was not the discoverer of the monsoons but that he was the first to apply this discovery to practical navigation for crossing the Indian Ocean¹⁸⁴.

181. WELLSTED 1838, p. 383 (early 3rd century BC) ; STUTTERHEIM 1929, p. 49-51 (there are traces on influence of Hellenistic Egypt in the art of Central Java ; this view was criticized in WALES 1950, p. 37-42) ; VAN BEEK 1958, p. 147 (n. 41 – writes that Indian and Arabian sea-traders delivered cassia to Arabia already in the 4th century BC) ; VAN BEEK 1960, p. 136-139 (Arabian sea-traders knew the monsoons and could build ships large enough to cross Arabian sea ; see the opposite view – Arabian seamen neither used southwest monsoon [only the north-east in the winter for sailing in both directions], nor possessed ships large enough to cross Arabian Sea – HOURANI 1951, p. 5, 28 ; HOURANI 1960, p. 135-136) ; BÖKER 1962, col. 404 (in the early 2nd century BC the monsoon navigation was practised by the Indian and Arabian mariners).

182. KENNEDY 1898, p. 248-287 ; HERRMANN 1913, p. 560 ; BENGTON, OTTO 1938, p. 204. n. 2 ; BRADDELL 1939, p. 148 ; BRADDELL 1947a, p. 163 ; BRADDELL 1947b, p. 6-10 ; HOURANI 1951, p. 28 (agrees that Arabian seamen could reach India, however no answer can be given on the ways of navigation ; LAMOTTE 1953, p. 104 (stresses that the monsoons were known already to Nearchos) ; VON WISSMANN 1953, p. 69 ; TIBBETTS 1956, p. 183-189 (postulates the existence of the sea-way from Arabia to South-East Asia about 2000 BC, and the location of the land 'Ophir in modern Sumatra and Malay Peninsula) ; DAS GUPTA 1967, p. 5 ; HETTI 1968, p. 49 ; THOMAS 1932, p. 259 ; CURTIN 1984, p. 97 ; DURING-CASPERS 1986, p. 24-25 ; SIDEBOTHAM 1986b, p. 8, 46 ; THAPAR 1990, p. 107.

183. RASCHKE 1978, p. 655-656.

184. HOURANI 1951, p. 26 (Hippalos discovered the possibility to use south-west monsoon to reach India faster) ; TCHERNIA 1995, p. 995 ; TCHERNIA 1996, p. 253.

III. 2. Other factors of development of the navigation in the Indian Ocean

All these views have little to do with the text of *Periplus*. Its author says that Hippalos discovered the crossing of the open sea : τὸν διὰ πελάγους ἐξεῦρε πλοῦν (57: 19. 3). He says that Hippalos **observed the location of the trade marts and shape of the sea** and thus discovered the way through the {open} sea (57: 19. 7) – nothing is said about the knowledge or the use of the winds by him. The difference between the former practice and that of Hippalos is that the former sea-traders had to **sail along the coastal bays on smaller vessels**. This means that Hippalos used a larger vessel, with which, following the indication of his map of the sea-ports, he managed to undertake direct sailing to Scythia, Barygaza and Limyrike.

The author of the *Periplus* reports that sailing to Barygaza and Scythia was « risky, but the most advantageous and quite short » (39: 13. 13-14). Here he does not distinguish two routes – to Scythia and to Barygaza from the way to Limyrike : « that is why [...] some [...] sail to Limyrike [...], and those to Barygaza or Scythia [...] » (57: 19. 7-9). All three directions were used by the Roman sea-traders on larger ships and these regions were reached across the open-sea.

Besides progress in shipbuilding the enlarged knowledge in geography had to be one of the foundations for the composition of the map of the sea. This knowledge had to be gained from practical experience – for that quite a lot of successful sailings had to be accomplished, so that the trade between these so distant regions could thrive.

This question was analyzed by A. Tchernia. Among the factors of development of the transoceanic navigation he pointed out surety in success : the sea-traders had to be sure that they would not lose their way in the borderless Ocean. They had to have exact geographical ideas based on correct cartographical orientation of Arabia and India, i.e. North-South and not West-East, as South Asia was represented in the works of Eratosthenes, Strabo and even Ptolemy, while Posidonius was the only geographer who correctly oriented India on the map.

Following the idea of A. Dihle that the Greeks explored Western India in the 2nd century BC during the conquest of India by the Indo-Greeks, which became the foundation of the future knowledge of Hippalos¹⁸⁵, A. Tchernia supposed that the Indo-Greeks met Egyptian Greeks in the delta of Indus and thus transmit them their correct practical knowledge¹⁸⁶. A. Tchernia used as a starting point for developing this idea the information of the *Periplus* about the port of Arabia Eudaimon, which was before being sacked the meeting point of the Greek and Indian traders.

185. DIHLE 1978, p. 565-566.

186. TCHERNIA 1995, p. 997-998.

The *Periplus* seems to have said nothing in this respect¹⁸⁷. It only says that the Greek sea-traders did not go further than Arabia Eudaimon (in no way they could reach Patala), and that the Indian traders reached Arabia Eudaimon. The same is said by Agatharchides of Cnidus¹⁸⁸. The territory around modern 'Aden was the most probable meeting point of the sea-traders from Hellenistic Egypt and India, where they could exchange their experience. As to the « πρότεροι » – the earlier sea-traders, which sailed along the coastal line – the author of the *Periplus* could mean Roman, Arabian and Indian traders and with very little probability Greeks from India (Indo-Greeks) : if they were Indo-Greeks, the ignorance of the sea-ways to India by Eudoxus of Cyzicus and Ptolemy Euergetes II (Strabo. II. 3. 4) looks unexplainable.

From the other side this does not mean that the Greeks did not explore the Western coast of India in the 3rd-2nd centuries BC. Their penetration into South-West India is demonstrated by the find of more than dozen of Seleucid coins only in the region of Karūr – some of them were struck by Seleukos II (246-226 BC) ; there have been also found four Phoenician coins, one Thracian, two from Rhodos and one from Crete¹⁸⁹. On the one hand we may not say with full confidence (after A. Tchernia) that already in the 2nd century BC the Greeks from Egypt had fully explored the Ocean way to India¹⁹⁰ ; on the other hand we must agree that the primary foundations for such sailings took place already in the 3rd century BC, – that is accumulation of the exact geographical ideas of the Western coast of India.

If there were stable sea contacts between Mediterranean and India before the beginning of the Christian era (sailing of Hippalos), developed by the Indians, inhabitants of Arabia, Persians or anybody else, the Greeks would have had some knowledge of it : the sea-trade, connected with the functioning of large ports, could not remain secret. If Darius was aware of the navigation along the coast of Indian

187. [...] μήπω ἀπὸ τῆς Ἰνδικῆς εἰς τὴν Αἴγυπτον ἐρχομένων μηδὲ ἀπὸ Αἰγύπτου τολμώντων εἰς τοὺς ἔσω τόπους διαίρειν ἀλλ' ἄχρι ταύτης παραγνομένων... [« ... since vessels from India did not go on to Egypt and those from Egypt did not dare sail to the places further on but came only this far... » (26: 8. 27-29) – translation from CASSON 1989, p. 65].

188. [...] νῆσοι δὲ εὐδαίμονες παράκεινται [...]. Ἐν ταύταις ταῖς νήσοις ἰδεῖν ἔστιν ὀρμούσας ἐμπορικὰς τῶν προσχώρων σχεδίας, πλείστας μὲν ἐκεῖθεν οὐ κατεστήσατο παρὰ τὸν Ἰνδὸν ποταμὸν ὁ Ἀλέξανδρος ναύσταθμον, οὐκ ὀλίγας δὲ ἀπὸ τῆς Περίδος καὶ Καρμανίας καὶ τῆς σύγγυς πάσης [« Located near the country are the Fortunate islands [...] In these islands one can see riding at anchor merchant vessels from neighbouring countries. Most of those encountered there are from the port Alexander built by the Indus River. Not a few, however, come from Persia and Carmania and the whole nearby region » (*De mari*. § 105) – translation from BURSTEIN 1989, p. 169].

189. KRISHNAMURTHY 1996, p. 8-9.

190. TCHERNIA 1995, p. 999-1000.

Ocean, there were not any sense in the expedition of Skylax. Darius promoted navigation in the Indian Ocean after his sailing, most probably for developing sea commerce¹⁹¹. However, this knowledge must have been quickly forgotten.

The Greeks did not possess in the 4th century BC either ships, large enough, or knowledge, deep enough, in navigation to undertake such an expedition. As one see from the goal given by Alexander the Great to the fleet of Nearchus during its withdrawal from India, the Greeks did not even know, if the sea along the shores of Indian Ocean was navigable. It means not only that there was no regular communication between India and Mediterranean : even the theoretical possibility to reach India from Mediterranean by sea was unknown (Arr. *Ind.* 20. 3-5) ! The sailing itself threatened the companions of Alexander and the king himself.

The local vessels did not meet the requirements of navigation for quite large distance : Nearchus describes them as μικρὰ καὶ πονηρά – « small and poor » (Arr. *Ind.* 27. 4). The difficulties of the navigation were so serious that Nearchus and Archias were not recognized after having returned to the camp of Alexander so greatly were they emaciated (Arr. *Ind.* 34. 7), and their vessels during the sailing constantly required repair. Evidently, there was no regular use of the monsoons by any ancient mariner in 6th-4th centuries BC, the navigation between Mediterranean, Arabia and India was but sporadic.

Sailing was made on vessels of 150 tons' displacement in the 1st half of the 1st mill. BC. The 300-500-tons ships were rare. In spite of the large gap in the vessels' iconography in the 2nd half of the 1st mill. BC one might say that by the 1st century BC the normal displacement of the vessels in the Mediterranean was about 1300 tons, the largest ships' displacement in the Mediterranean reached 1700 tons¹⁹². Political tranquility, economic stability, experience of quite numerous wars – the navy was one of the main striking forces of the Roman army – helped progress in shipbuilding, which at least permitted to abandon the coastwise trade between Arabia and India. The large ships of the early Roman period were strong and equipped well enough to undertake transoceanic voyage¹⁹³.

The author of the *Periplus* was perfectly aware of the peculiarities of the navigation in the Red Sea. There is, however, something that makes his knowledge unique in this respect. He knows the reason and the time of the changes in navigation between Egypt, Arabia and India. He gives as the reason for them the introduction of large vessels and composition of the first map of the coastal line

191. Μετὰ δὲ τούτους περιπλώσαντος Ἰνδούς τε κατεστρέψατο Δαρείος καὶ τῇ θαλάσῃ αὐτῇ ἐχρᾶτο [« After this circumnavigation, Darius subjugated the Indians and made use of this sea » (Herod. IV. 44. 3) – translation from GODLEY 1921, p. 245].

192. CASSON 1980b, p. 23.

193. ROUGÉ 1988, p. 73-74 (the history of the shipbuilding is given in detail in the following publications : BASS 1974 ; CASSON 1986 ; see also graffito with the image of the ship from Berenice, dated 50-70 AD : SIDEBOTHAM 1995, p. 315-317).

by a certain Hippalos, based on the knowledge of the location of the ports of trade. This and not the knowledge of possibility of use of the monsoons was the foundation of the first crossing of the Erythraean Sea.

These two reasons made possible the crossing of the Erythraean Sea between South Arabia, East Africa and India by Hippalos. So, according to the author of the *Periplus*, Hippalos was not the first to use the monsoon to sail across the ancient Erythraean Sea (in this case modern Arabian Sea), but he was the first to draw the map. Since he had to have quite a large ship, he could cross the Erythraean Sea.

Needless to say that the author of the *Periplus* had to have certain theoretical general ideas of the history of navigation in the basin of the Erythraean Sea. He had to rely on the experience of his predecessors. The paragraph 57 clearly reveals the instructive, educative aim of the *Periplus*.

IV. Conclusion

The geographers of the Hellenistic and Early Roman periods were well aware of the geography and political situation of South Arabia and East Africa. The informants of Strabo, Pliny the Elder and Ptolemy have recorded several hundreds of geographical and ethnic names (see e.g. Plin. *NH*. VI. XXXII/157-159; Ptol. VI. 7) and other practical data. Its presentation was bare and transparent.

In comparison with these sources the geographic information of the *Periplus* seems poor. His author mentions a few names and leaves most of the territory of Arabia a « white spot ». He even understands the notion of « Erythraean Sea » in another way than Pliny the Elder : for the latter Erythraean Sea was modern Red Sea, for the author of the *Periplus* this was a sea-basin of modern Indian and Pacific Oceans. It is impossible that he simply did not know the names of the stations, known to the informants of Pliny the Elder and Ptolemy. However, he was evidently cut off from « scientific » geography.

In contrast to the informants of Strabo and Pliny the Elder, the author of the *Periplus* knows nothing (or at least says nothing) of the consumption of South Arabian, East African or Indian products in the Mediterranean. Even Herodotus knows that Phoenicians were the suppliers of South Arabian incenses to Mediterranean. The author of the *Periplus* writes that incenses were delivered to Qana' (27: 9. 8-10). The rest is unknown to him. Pliny does not only know that the frankincense is delivered to Šabwa, but even gives the distances between the starting points and markets in the Eastern Mediterranean (XI. XXXII/63-64).

Therefore, we might suppose that the author of the *Periplus* did not originate from a cultivated milieu in the Mediterranean. The description of the places that he knew personally was reasonable and bare. However when he touched on subjects which he did not know by himself, he judged them in a very « popular » way.

The author of the *Periplus* reports of the frankincense in Moskha Limen (where he has not been personally), as if the latter was guarded by a divine force :

[...] ὄρμος ἀποδεδειγμένος τοῦ Σαχαλίτου λιβάνου πρὸς ἐμβολήν, Μόσχα λιμὴν λεγόμενος, εἰς ἣν ἀπὸ Κανὴ συνήθως πλοῖα πέμπεται τινα καὶ παραπλέοντα ἀπὸ Λιμυρικῆς ἢ Βαρυγάζων ὀψινοῖς καιροῖς παραχειμάσαντα παρὰ τῶν βασιλικῶν πρὸς ὀθόνιον καὶ σίτον καὶ ἔλαιον λίβανον ἀντιφορτίζουσι παρ' ὄλον τὸν Σαχαλίτην χώματι κείμενῳ καὶ ἀφυλάκτῳ, δυνάμει θεῶν τινὶ τοῦτον τὸν τόπον ἐπιτηρούντων¹⁹⁴.

This could be compared with the description of the frankincense trees by Herodotus (III. 107) :

[...] τὰ γὰρ δένδρεα ταῦτα τὰ λιβανωτοφόρα ὄφεις ὑπόπτεροι, σμικροὶ τὰ μεγάθεα, ποικίλοι τὰ εἶδεα, φυλάσσουσι πλήθει πολλοὶ περὶ δένδρον ἕκαστον, οὔτοι οἱ περ' ἐπ' Αἴγυπτον ἐπιστρατεύονται· οὐδενὶ δὲ ἄλλῳ ἀπελαύνονται ἀπὸ τῶν δενδρέων ἢ τῆς στύρακος τῷ καπνῷ [...] Ὡς δὲ καὶ αἱ ἔχιδναὶ τε καὶ οἱ ἐν Ἀραβίῳσι ὑπόπτεροι ὄφεις εἰ ἐγίνοντο ὡς ἡ φύσις αὐτοῖσι ὑπάρχει, οὐκ ἂν ἦν βίωσιμα ἀνθρώποισι¹⁹⁵.

There is no literal repetition of the Herodotus' information in the *Periplus* in this case. However, there is certain similarity : reference to the surnatural forces in the form of unnatural snakes.

The only fragment where he speaks of the power of the gods is the last paragraph, where he mentions the regions beyond Thinai, i.e. modern China : they are not known because of their remote situation, rough climate and certain power of the gods (66: 22. 7-9).

It is interesting that being the bearer of a strange and outdated idea of the world, mixed with the views of early Archaic and early Hellenism, the author of the *Periplus* does not hesitate to judge the level of education of the Aksumite king Zoskales, saying that he was quite experienced in Greek writings (5: 2. 21-22). He obviously found himself a clever man !

So, the *Periplus* appears to be not a source of « bare », practical destination, as corresponding parts of *Natural History* of Pliny the Elder or *Introduction into Geography* of Ptolemy. Though the personal experience of the author of the *Periplus* in description of South Arabia and adjacent sea-basins is clearly seen,

194. « ... A designated harbor for loading the Sachalite frankincense, called Moscha Limên [« Moscha Harbor »]. Some vessels are customarily sent to it from Kanê ; in addition, those sailing from Limyrikê or Barygaza that passed the winter [sc. At Moscha] because of the season being late, by arrangement with the royal agents take on, in exchange for cotton cloth and grain and oil, a return cargo of frankincense, the Sachalite variety throughout, at a mole that stands there unguarded, thanks to some power o the gods, who watch over this place » (*PME*. 32: 10. 29 – 11. 5) – translation from CASSON 1989, p. 69, 71.

195. « For the spice-bearing trees are guarded by small winged snakes of varied color, many around each tree ; these are the snakes that attack Egypt. Nothing except the smoke of storax will drive them away from the trees. [...] So too if the vipers and the winged serpents of Arabia were born in the natural manner of serpents life would be impossible for men » (III. 107. 2, 109. 1) – translation from GODLEY 1921, p. 137].

one may also state that he remains under strong influence of « popular » tradition. Information that circulated in the centre of the Empire was accessible to him, but in a strongly corrupted form. He could not verify such information according to official sources.

The political experience of high level of the author of the *Periplus*, the direct knowledge of the royal courts in Aksum, South Arabia and West India do not allow to see in him neither a simple captain nor a merchant or a cartographer (though he used previous geographic and in particular cartographic tradition) who would like to gather the information of the voyagers. Quite particular geographical ideas, the existence of the blank spots on the map of the *Periplus*, filled with unnatural creatures (in East Africa, in East Arabia and in South East Asia), dependence on the popular philosophical currents indicate that this person was not trained in the most important cultural centers of the Empire, that his personal views were quite far from Roman science, represented e.g. by Pliny the Elder. He surely knew personally most of the described regions. Wishing to make a complete description of the Erythraean Sea, he followed the stereotypes of the popular Greco-Roman tradition.

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