SPANISH AMPHORAE FOUND NEAR SPLIT

NENAD CAMBI

Arheološki muzej, Split

In the summer of 1958 the remains of a Roman ship were found in the Špinut bay at Split some 50—80 metres to the north of the building of the rowing club »Gusar« from Split (fig. 1). It is strange it was discovered only in 1958, because Špinut is one of the most popular and crowded bathing places at Split and the remains of the ship cargo were lying in shallow water, nowhere overpassing 3,5 metres. As soon as the site was discovered large number of amphorae was either distroyed or stolen. According to some witnesses the number of perished amphorae must have been between 40—50.



Fig. 1 The Salonitan bay with the indication of the Špinut shipwreck. — Salonitanski zaliv s označenim mjestom brodoloma u Špinutu

Most of those amphorae have completely disappeared and I have succeeded in tracing a few of them. Unfortunately as they were not taken out by experts most of them were broken to pieces and only few remained complete. Necks and handles, the most important parts of an amphora, usually remained in the hands of swimmers who threw them aside not considering them worth keeping. The Archaeological Museum at Split was not informed of the find, but three completely preserved pieces, as well as a fragment of a neck and a handle were later acquired. Besides these amphorae in the Archaeological Museum, I have seen

six more belonging to private collections of those who found them. Thus I got the oppornity to study 10 amphorae, and it was enough to find out their character, content, origin and stamps.

The amphorae found at Špinut are of Dressel 20 type (fig. 2) which became well-known after their being discovered in *Castro Pretorio* and on Monte Testaccio in Rome.³ Dressel 20 type amphorae are characterized by their globular body whose diameter slightly overpasses two thirds of the total height, then by the strongly built handles, a short neck merging in a single curve into the body and the small wart at the base. Their height is approximately 75 cm and their diameter at the greatest width is about 54 centimetres.⁴ All the examples

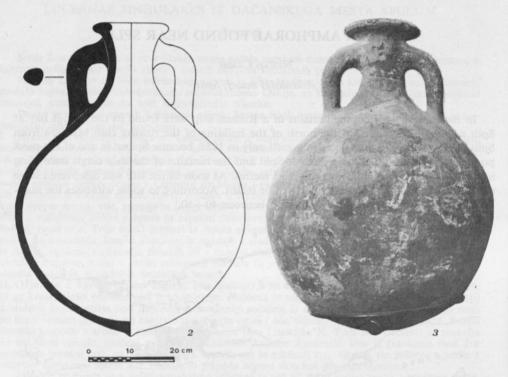


Fig. 2—3 Spanish amphora from Špinut (Dressel 20 type). — Hispanska amfora iz Špinuta (Dressel 20)

although not the products of the same workshop (which is evident by their different stamps) are almost identical (fig. 3). Variations are insignificant ones: greater or smaller curve of the body and of the handles. Amphorae of this type are further characterized by two very important details: stamp on the handles and *tituli picti* (painted inscriptions) on the upper part of the body. Both details can be seen on our examples and that is why I considered them to be remarkable pieces.

The inscriptions, originally red, were later covered by the same colour so that they appear to be like strange red painted rectangles (fig. 4 and 5). The first line of the three-line-inscription (according to analogies from Monte Testaccio) referred to the weight of the empty amphora, the second to the name of the merchant or shipowner in the genitive case, the third to the weight of vessel with the content.⁵ Besides the above mentioned details the inscription

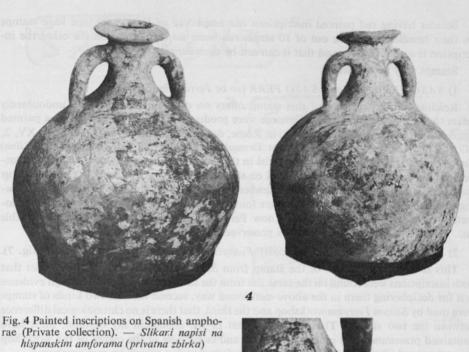


Fig. 4 Painted inscriptions on Spanish ampho-



Fig. 5 Detail of painted inscription (Private collection). - Detalj slikanog napisa (privatna zbirka)

sometimes contained the records from portorium where duty was paid.6 Our amphorae do not seem to have had the latter record. Unfortunately even the former one, whose traces are still visible can not be deciphered, because the colour has faded away and the surface is badly preserved.

Besides having red painted inscriptions our amphorae of Dressel 20 type have stamps on their handles. Only one out of 10 amphorae bears no stamp and on the other the inscription is so badly preserved that it can not be deciphered.

Stamps vary as follows:

1) SAXO FERR (Figlinae) SAXO FERR (eo or Ferri) (fig. 6).7

Reading and completing of this stamp offers no difficulties. The stamp undoubtedly refers to the place name where amphorae were produced. This can be proved by a painted inscription found on Monte Testaccio in Rome, dated by consuls to A. D. 149 (CIL XV, 2, 4171). This inscription, preserved on a Dressel 20 globular amphora, mentions Fig(lina) Saxo (Ferreo), and then the town Corduba in the Roman province Hispania Baetica in southern Spain, where the goods were taxed on their way to Rome. Saxum Ferreum workshop was supposed to have been situated somewhere up the river Baetis (now Guadalquivir). Owing to the fact that Saxo Ferr stamps were found at Huerta de Belen, situated only few kilometers from the Roman town Celti (now Peñaflor) such a supposition is an acceptable one.8 There are two Saxo Ferr stamps preserved from the find of Špinut.

2) FSF.A.QVA. (Ex)F(iglinis) S(axis) F(erreis).9 A.QVA remains unreadable (fig. 7).

This is another variation of the stamp from Saxum Ferreum workshop. The fact that both inscriptions were found on the same site from the same period is a good enough evidence first for deciphering them in the above mentioned way, second that the two kinds of stamps were used by Saxum Ferreum workshop and the third, that there is no chronological difference between the two stamps. The unreadable part of the stamp, in my opinion, must have contained praenomen and nomen, or nomen and cognomen of the owner of the workshop or estate on which figlina was situated. I have found such a stamp on two amphorae.

3) SCOROBRES. (Figlinae) SCOROBR(ens)ES (fig. 8, 9).10

I have succeeded in finding SCOROBRES stamps on two examples housed in the Archaeological Museum at Split and two in the private collections. This stamp was found in various regions of ancient world, but only on small fragments. The fact that this stamp was already found on a preserved globular amphora at Augst, suggests the conclusion that this stamp originated from *Hispania Baetica*.¹¹ The stamps on our amphorae are further proofs for such a conclusion. The better preserved stamp is important for the completing. Above letters O and B there is a horizontal line (fig. 8), obviously for abbreviation sake, suggesting that the stamp *SCOROBRES* should be completed (*Figlinae*) *SCOROBR(ens)ES*. The stamp refers to the place name where figlina was. It is impossible to state precisely, but owing to the fact that the stamp was found together with the other examples at Špinut it must be of south Spanish origin.

On an amphora bearing *Scorobres* stamp, hardly readable cursive letters are engraved. They might be read *SECVM*, but the exact meaning remains uncertain (fig. 10).

4) OC PA. Probable completing OC(tavii) PA(terni) (Figlina) (fig. 11).

The last is the most important stamp preserved from the Spinut site, because it is unique, and up to now, not known on globular amphorae. As far as I know the only similar stamp was found at Diè departman Drome in France, but unfortunately it is not known to which type of amphorae it belongs. ¹² Callender completed the stamp deciphering the nomen and the cognomen of the owner of the estate or workshop. I do consider the little amphora represented in the centre of the stamp to be symbolic indication of figlina rather than estate. In the Diè stamp a palm branch is represented in the centre as the distinguens between two parts of onomastic formula.

SAXOFERM BLI REG 4 cm

Fig. 6 SAXO FERR stamp. — Žig: SAXO FERR
Fig. 7 FSF'A'QVA stamp. — Žig: FSF'A'QVA
Fig. 8 SCOROBRES stamp. — Žig: SCOROBRES
Fig. 9 SCOROBRES stamp. — Žig: SCOROBRES
Fig. 10 Engraved inscription on a Špinut amphora (Private collection). — Urezani napis na amfori

iz Špinuta (privatna zbirka)

Fig. 11 OC PA stamp. — Žig: OC PA Fig. 12 LIVNIM stamp on an amphora from Vinkovci. — Žig LIVNIM na amfori iz Vinkovaca Fig. 13 LFCCVCA stand on an amphora from Vinkovci. — Žig LFCCVCA na amfori iz Vinkovaca Globular amphorae of Dressel 20 type were exported from Roman province *Baetica* since as early as the beginning of the first century A. D. (the strata dating back to A. D. 10—43 at Colchester) and they disappeared somewhere about the middle of the 3rd century (they can be found in the Niederbieber occupied from 190—260). ¹³ In order to date them more precisely attention should be drawn to their appearance at *Pompei* and *Stabiae*, namely before A. D. 79., as well as that in *Castro Pretorio* (the middle of the 1st century A. D.) ¹⁴ The last precisely dated example of globular amphorae is that from A. D. 255 found at Orti Torlonia in Rome. ¹⁵

Owing to Dressel's excavations on Monte Testaccio, which yielded several painted inscriptions with consular dates, there is good enough evidence for the datation of certain stamps. It is very important that our stamp *SAXO FERR* is dated to A. D. 149 according to a painted inscription from Monte Testaccio, thus the life of the stamp should be between A. D. 110 to 160.¹⁶ The stamp *FSF.A.QVA* which is the variation of the same workshop undoubtedly belongs to the same period.

The stamp *SCOROBRES* has no precisely dated examples. The pieces, however, discovered on Monte Testaccio "in infimo colle" of the eastern side of the slope according to Dressel should be dated to the period of the Emperor Antoninus Pius (138—161).¹⁷ Our amphorae suggest also such a date, because they were found together with the precisely dated stamp *SAXO FERR* attesting their belonging to the same period.

There is no good enough evidence to date *OC PA* stamp, since up to now, only one example of such a stamp is known. That is why the appearance of this stamp together with the others from the site Špinut is very important and enables us to date it in the first half of the II century A. D.

As far as the ship is concerned it seems strange it was ship-wrecked so near the coast in a well protected corner of the Salonitan bay, almost at the doors of *Salona*. Without systematic underwater researches it is rather difficult to try to guess what caused its catastrophy. Those who found amphorae believe to have seen the remains of boards which suggest the conclusion that at least badly preserved ribs may still exist, and that would enable us to speak with more precision about the destiny of the ship.

The ship was carrying a large number of amphorae of Dressel 20 type with various stamps. If only I could have studied those broken or stolen amphorae the number of stamps might be even greater. Anyway this is enough to be sure that ship was carrying amphorae with products from various estates, because the workshops tried to satisfy needs of the nearby estates or even were part of them. The valley around the river Baetis is first and foremost planted with olives and according to Pliny (Nat. hist. XV, 8) was producing oil of high quality which was second only to that produced at Venafrum in Campania, but was equal in quality to that produced in Istria. The ports of province Baetica were often visited by middlemen ships, because they were buying oil for themselves and then tried to sell it all over the Empire.18 According to the painted inscriptions most of those middlemen came from Gallia Narbonensis or Italy.19 They bought their goods in the large port stores such as Corduba, Hispalis or Astigi. 20 Those are the places where they had to pay taxes. Numerous and different stamps from the Spinut site lead us to conclude that amphorae with oil were bought on various estates and then transported and stored in a large port. If we succeed in deciphering some of those badly preserved tituli picti of Špinut amphorae we might better understand the problem of the south Spanish oil trade.

The oil trade from *Baetica* was developed mostly in the western parts of the empire (*Hispania*, *Gallia*, *Germania*, *Britania*, *Italia* ets.). ²¹ No globular amphorae of Dressel 20 type, at least as far as I know, was found in the eastern part of the Empire, and consequently no

products from Spain. That is why our find from Špinut is extremely important because it suggests the conclusion that the export of Hispanian oil was not restricted only to nearby western provinces, but it reached even the far off countries as for instance, the eastern part of the Adriatic. Accordingly the wrecked ship from Špinut testifies to the existence of trade with Hispania as early as the second century A. D.

The Špinut site is not the only evidence of Dressel 20 globular amphorae type on the Adriatic. There seem to be two more underwater sites with the same type of amphorae. Somewhere near the island Dugi otok and Žut Dressel 20 amphorae were found, but unfortunately the site remained unknown. The only preserved amphora from that site can be seen in a restorant at Biograd.²² The other underwater site, according to the words of the colleague Š. Mlakar, is near Fažana in Istria. An example from that site is on view in the underground halls of Pula amphitheatre.²³ Unfortunately neither of the two preserved pieces has any stamp. Another example of such an amphora from northern Adriatic is found in Aquileia.²⁴

Not only the sites on the Adriatic, but even those inland offer some pieces of South Spanish globular amphorae. At Vinkovci, ancient *Cibalae* in Pannonia, some fragments of these amphorae were found. The stamps are preserved on three handles. On two of them the stamp is LIVNIM in the first line and ELISSI(P) in the second, completed L(uci) IVNIM IVIDIA IVID

Both stamps are of South Spanish origin, most probably from *Decum* on the left bank of the river *Baetis*. The *MELISSI* stamp appears on several amphorae from Monte Testaccio together with F. *SCIMNIANO* stamp.²⁶ The fact is very important since the latter one is dated to the A. D. 161 (*CIL* XV, 4350) by painted inscriptions.

The above mentioned finds attest that the Spanish trade reached as far as the northern Adriatic and Danube and further finds might be expected in the future (fig. 14).

All this testifies that the importation of oil from *Baetica* reached as far as the Adriatic, namely beyond the line formed by the Alps and the Apennines as Tschernia stated.²⁷ On the other side Spanish oil in these parts of the ancient world must have been the rival to Istrian oil.²⁸

I should like to use this opportunity for pointing out some other connections with Spain. Besides the above mentioned evidences for the existence of trade and contacts there are two more. During the Yugoslav-American field-campaign at Salona a fragment of Iberian pottery was found on the Forum area. This is, according to M. Del Chiaro, who has published that fragment, the fartherest eastern point on which such a pottery was found. The other find testifying to the existence of trade with Spain is a pair of small columns made of so called marmor celticum of Pyrénees origin in the Zadar Archaeological Museum. The origin of marble was found out by J. B. Ward Perkins (see his lecture held at Split on the "Disputationes Salonitanae").

As I have already pointed out Dressel 20 amphorae were used for transporting oil although some scholars doubted the fact and considered them to be good for garum or wine. An amphora from Špinut, now in private collection, still strongly smells of oil which I myself have experienced. Although the Roman province of Dalmatia must have been rich in producing oil, here we have the evidence of its being imported. In the vicinity of Salona there are many archaeological evidences testifying to the rich olive cultivation and oil production. As far as I know there are at least six or seven *trapetums* for getting oil, some of them belonging even to the 5th century A. D. when agriculture in these parts must have been in decadence. It is rather strange to think that besides producing their own oil and importing famous Istrian one (which is evident from finds of Histrian amphorae and stamps

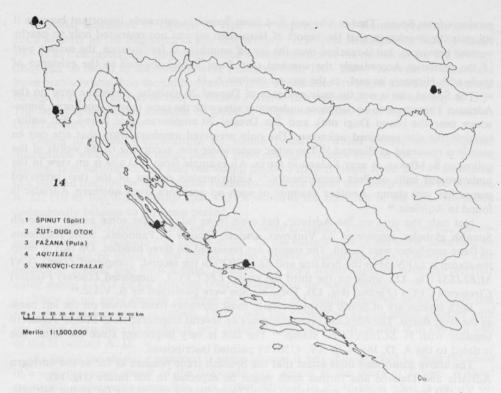


Fig. 14 Finds of Spanish amphorae on Adriatic littoral and Jugoslavian inland. — Nalazišta hispanskih amfora na obalama Jadrana i u Jugoslaviji

at Salona and Narona), they still imported oil from Spain. I would like to clarify this problem by drawing a parallel with another country so famous for its excellent oil which all the same imported large quantities of Hispanian one. The country in question is Campania (PLINY, Nat. hist. XV, 8 and Varro, R. R, I, II, 6). I do consider that the conclusions A. Tschernia has come to, when Campania was in question, could be applied to Dalmatia as well. The oil production in Dalmatia must have been rather limited, not well organized to meet the needs of the large market, that is why they started importing Istrian oil. To meet the needs of the large towns such as Salona, Narona and Jader used to be, it was necessary to have better organized production. In the Ist century B. C. and A. D. oil was imported only from Istria, while later trade began with Hispania as well. This might also be the result of decadence in oil production in Istria in the 2nd century A. D. as was pointed out by A. Degrassi. 32

¹ N. CAMBI, Brodolom rimskog broda s teretom hispanskih amfora u Splitu, Nedjeljna Dalmacija (January 23rd 1972) p. 12 and 13.

² Recently walking along N. Tesla street (near Spinut bay) in Split I happened to come across a neck without handles of such an amphora. Since some traces of its being in the sea were still visible on its surface, it undoub-

tedly belongs to the Spinut find. Somebody must have thrown that insignificant piece of amphora ten years after it was taken from the sea.

³ About the researches on Monte Testaccio cfr. H. Dressel, Richerche sul Monte Testaccio, *Annali dell'Istituto di Corr. Arch.* 50 (1878) p. 118 ff. H. Dressel, *CIL* XV, 2, *Sigilla impressa*

in amphoris in Monte Testaccio et in Emporio Repetis p. 491 ff. H. Dressel, Scavi sul Monte Testaccio, Bull. Comm. arch. Comunale 20 (1892) p. 48 ff. H. Dressel, Eine Amphora aus Spanien mit lateinischen Inschriften, Bonn. Jahrb. 95 (1894) p. 66 ff. R. ETIENNE, Les amphores du Monte Testaccio au III siecle, Melanges d'arch. et d'hist. 61 (1949) p. 156 ff. P. Aström, Roman Amphora Stamps from the Monte Testaccio, Opuscula archaeol. 7 (1952) p. 166 ff.

⁴ Approximately the same dimensions were given by H. CALLENDER, Roman Amphorae (London 1965) p. 20 and M. BELTRAN LLORIS, Las Amforas Romanas en Espana, (Zaragoza

1970) p. 464.

⁵ M. H. CALLENDER, o. c., p. 20 ff.

⁶ M. H. CALLENDER, o. c., p. 20.

M. H. CALLENDER, o. c., p. 242 no. 1573.
 M. BELTRAN LLORIS, o. c., p. 188. no. 169.

⁸ M. H. CALLENDER, *l. c.* M. BELTRAN ORIS. *l. c.*

LLORIS, l. c.

M. H. CALLENDER, o. c., p. 136 no. 675
 b. M. BELTRAN LLORIS, o. c., p. 144. no. 169.
 M. H. CALLENDER, o. c., p. 244. no. 1581.

¹¹ M. H. CALLENDER, l. c. states one unpublished piece of globular type amphora from Augst.

12 CIL XII, 204. M. H. CALLENDER, o. c.,

p. 197. no. 1244.

¹³ M. H. CALLENDER, o. c., p. 20.

¹⁴ CIL X, 8049 and 8333, I. Compare also A. TSCHERNIA, Amphorae de Bétique à Pompei, Mélanges d'archéologie et d'histoire 76 (1964) p. 419. H. DRESSEL, Di un grande deposito di anfore rinvenuto nel nuovo quartiere del Castro Pretorio, Bull. Comm. Arch. Com. Romana 7 (1879) p. 36 ff.

15 F. Zevi, Appunti sulle anfore Romane,

Archeologia Classica 18 (1966) p. 221.

M. H. CALLENDER, o. c., p. 242. no. 1573.
 H. Dressel, CIL XV, 2 3170. Cfr. M. H.
 CALLENDER, o. c., p. 244, as well as LLORIS

Beltran, o. c., p. 491. Suggest datation in the 1st half of the 2nd century A. D.

¹⁸ M. H. CALLENDER, o. c., p. 21.

¹⁹ M. H. CALLENDER, *l. c.* ²⁰ M. H. CALLENDER, *l. c.*

²¹ A. TSCHERNIA, o. c., p. 429 and maps I and II, H. AUBIN, Der Rheinhandel in römischer Zeit, Bonn. Jahrb. 130 (1925) p. 18. A. FROVA, Marche di anfore e altri bolli romani del Milanese, Epigrafica 14 (1952) p. 49 ff.

²² The amphora was found in the Proversa channel marked by lighthouses between Island Žut and Dugi otok. It is now in the restorant

»Mornar« at Biograd.

²³ These amphorae must have been found in the channel between Fažana and Brioni. Another example of such an amphora is in the Centre for underwater activity at Pula.

²⁴ S. Panciera, Porti e commerci nell'Alto Adriactico, Aquileia e Alto Adriatico II, Aquileia

e Istria (Udine 1972) p. 88 ff. Pl. I.

²⁵ B. VIKIĆ-BELANČIĆ, Istraživanja u Vinkovcima 1966. godine. *Vjesnik arheološkog muzeja u Zagrebu*. N. S. 4 (1970) p. 172. fig. 4. Pl. VII, 1 and 2.

²⁶ Cfr. M. H. CALLENDER, o. c., p. 158. no.

379.

²⁷ A. TSCHERNIA, o. c., p. 429.

²⁸ A. TSCHERNIA, *l. c*.

²⁹ M. DEL CHIARO, An Iberian Sherd in Yugoslavia. *American Journ. of Arch.* 7 (1973) p. 65 ff. Pl. 13.

30 About this problem consult A. TSCHERNIA,

o. c. p. 421. note 2.

states that the oil production was excellent as far as the quality was concerned, but its quality could not meet the needs of the country. The oil from Dalmatia must have been of worse quality since it is rather strong and has to be mixed with kinds of better quality.

³² A. Degrassi, L'esportazione di olio istriano nell'età romana, *Atti e Memorie Soc. Istr. Arch. e Storia Patria*. N. S. 4 (1956) p. 104 ff.

ŠPANJOLSKE AMFORE PRONAĐENE U BLIZINI SPLITA

Sažetak

Ljeti 1958. godine pronađeni su ostaci rimskog brodoloma s teretom amfora u Špinutu, zaljevu sa sjeverne strane Marjana u Splitu. Teret je ležao na dubini od 3,5 metra i te je godine nestao sav površinski sloj amfora.

Kasnije je za tim amforama tragao autor i uspio pronaći 10 komada (4 u Arheološkom muzeju u Splitu, a ostali u privatnim zbirkama u Splitu).

Sve amfore iz Špinuta pripadaju tipu Dressel 20 koji je karakterističan po svom loptastom tijelu, relativno velike širine. Ove amfore su važne zbog toga što na drškama imaju žigove, a na tijelu slikane natpise (tituli picti) koji su, na žalost, zbog skidanja površinskog dijela amfore brzo propali.

Repertoar žigova na pronađenim amforama je slijedeći:

1) SAXO FERR ili razriješen [Figlinae] SAXO FERR[eo ili Ferri]

Ovaj žig sigurno pripada španjolskim amforama, jer je na Monte Testaccio pronađena jedna amfora koja se prema slikanom natpisu datira u 149 god. n. e. (CIL XV, 2 br. 4171), u kojem se spominje grad Corduba u južnoj Španjolskoj. Na osnovi toga Saxum Ferreum se smješta po svoj prilici u dolinu rijeke Baetisa (današnji Gaudalquivir).

FSF'A'QVA ili razrješen Ex F(iglinis) S(axis) F(erreis) A'QVA se ne može pročitati sa sigurnošću.

Ovaj žig je jedna varijanta gore spomenutog i to je daljnja potvrda da oni vremenski spadaju zajedno i da pripadaju jednoj te istoj radionici. Mišljenje autora je da se kraj natpisa treba dešifrirati kao praenomen i nomen, odnosno nomen ili cognomen vlasnika imanja ili figline.

3) SCOROBRES. Razrješen [Figlinae] SCOROBR(ens)ES

Veoma je mali broj loptastih amfora s tim žigom sačuvano. Naših nekoliko primjera su dokaz ranije postavljene pretpostavke da taj žig mora pripadati južno španjolskom tipu amfore.

4) OC PA. Vjerojatno čitanje OC(tavii) Pa(terni) [Figlina]

Ovaj žig je možda najvažniji od svih pronađenih u Špinutu. On je do sada jedinstveni primjerak na jednom primjerku loptaste amfore. Sličan žig je poznat na jednoj amfori iz Diè u Francuskoj, ali nije poznato na kojem tipu amfore (CIL XII, br. 204). Žig vjerojatno daje ime vlasnika figline ili posjeda. Amfora prikazana na pečatu između dva člana onomastičke forme vjerojatno radije označava figlinu nego posjed.

Globularne amfore poznate su prvenstveno u zapadnom dijelu antičkog svijeta od početka I st. pa do sredine III st. n. e. Poznate su postale nakon istraživanja H. Dressela na Monte Testaccio u Rimu. Ovaj naš nalaz na osnovi žigova datira se pouzdano u prvu polovicu II st. n. e. Njegova važnost je u tome što, budući da se radi o zatvorenom nalazu daje siguran oslonac i za dataciju žigova koje nije bilo moguće, precizno vremenski determinirati (*Scorobres* i *Oc Pa*).

Nalaz iz Špinuta dokazuje postojanje trgovine španjolskim uljem u Dalmaciji u II st. n. e. Do sada se općenito nije znalo da je import toga ulja stigao i u krajeve istočno od linije Alpe-Apenini. Da je taj import postojao dokazuju i još neki drugi nalazi tih amfora, kao što su ležajevi potonulih brodova u prolazu između otoka Žuta i Dugog otoka (primjerak amfore iz tog lokaliteta nalazi se u Biogradu u restoranu »Mornar«), te između Fažane i Briona u Istri (primjerak amfore u podzemnim prostorijama amfiteatra u Puli). Jedan primjerak loptaste amfore nalazi se i u Muzeju u Akvileji.

Osobito je važan, međutim, nalaz tri žiga hispanskih amfora u Vinkovcima što dokazuje import i u Panoniju, za koju se općenito smatralo da spada u domenu istarskog izvoza ulja. Žigovi iz Vinkovaca su LIVNIM u prvom retku i ELISSI [P] u drugom u dva slučaja. Taj žig se razrješava L(uci) IVNI[M]ELISSI [P]. Treći žig je LFCCVCA koji se po svoj prilici razrješava L(ucius) F(abius) C(rescens) CVCA (figlina).

Postojanje trgovačkih veza sa Hispanijom u antičko doba potvrđuju i neki drugi nalazi koje

autor također navodi.

Na koncu autor raspravlja zbog čega je bilo potrebno uvoziti ulje u jedan kraj koji je imao dosta razvijeno maslinarstvo. On dolazi do zaključka da je to vjerojatno uvjetovala nedovoljna količina ulja za podmirenje domaćih potreba, a možda i činjenica da je dalmatinsko ulje bilo uvijek pomalo žestoko pa ga je trebalo miješati s nekim drugim blažim.

Očito je, po autorovu mišljenju, da je španjolsko ulje moralo biti rival za tržište s istarskim,

koje je po starim piscima bilo jednake kvalitete.