

VI. PROVENANCE

When Levantine Painted Ware is found in Egypt there is generally no doubt that we are dealing with imports. Levantine imports can be recognised by their fabric designated as type IV in the Vienna system that differs from the main Egyptian fabrics of Nile and marl clays, i.e. I and II in the Vienna system.¹⁰⁴³ Type IV clay is usually fired to a more beige or orange colour and with clearly detectable lime inclusions. When further investigated Type IV fabric is, however, obviously not all of one source and different groups and subgroups can be determined. This has been an ongoing process dealing with the many imports from Tell el-Dab^{ca}.¹⁰⁴⁴

NEUTRON ACTIVATION ANALYSES BY JOAN HUNTOON AND PATRICK MCGOVERN

The first attempt to determine the origin of the Levantine imports to Tell el-Dab^{ca} through natural scientific methods was made by Joan Huntoon in the 1980s. She sampled hundreds of vessels, especially amphorae, or Canaanite jars, and examples of LPW were included in her neutron activation analysis (NAA) too.¹⁰⁴⁵ Sadly she did not live to finish her work, which was taken over by P. McGovern who added to the samples and published the combined results.¹⁰⁴⁶

The overall results determined a southern origin for the 'Gaza group' of the Canaanite jars (amphorae)¹⁰⁴⁷ as well as for the examples of LPW that could be determined: 3336 A (Fig. 19c), 6115 F (Fig. 21a), 6116 B (Fig. 21b), 6115 Y (Fig. 21c), 6114 I (Fig. 17a), 6114 E (Fig. 19b), 4406 (Fig. 22a), 4937 D (Fig. 29b) and 6115 Z. Others were 'most similar'

to the Southern Palestine group: 4226 (Fig. 16b), 4284 (Fig. 16a) and 4223 B (Fig. 19a). Yet others were determined to be of Nile clay, among them 6114 L (Fig. 23d), which was also confirmed by a preliminary result of the petrography analyses.¹⁰⁴⁸ As stated, an explanation for this could be a confusion of samples where the wrong sample was taken over from the NAA by the petrography. 2069, 2395 (Fig. 27c) and 4481 (Fig. 26c) were not surprisingly shown to be of Nile alluvium, as they belong to the local pTeY group.

The NAA results of LPW have been compiled in a list (Tab. 4)¹⁰⁴⁹ together with the petrographic results and it is noticeable that there are some discrepancies that will be referred to below.

PETROGRAPHIC ANALYSES BY ANAT COHEN-WEINBERGER AND YUVAL GOREN

In order to balance and verify or reject the NAA results, petrographic analyses were required and additional samples were taken for this purpose together with samples that had earlier been analysed by NAA. The tests were prepared and published by Y. Goren and A. Cohen-Weinberger.¹⁰⁵⁰

11 larger or smaller source areas in the Levant were established as different petrographic groups, designated A–K.¹⁰⁵¹ The samples show different grades of similarity to these groups: designated A for a highly reliable origin, B for a fairly reliable and C for an unreliable origin.¹⁰⁵²

As the earliest MB imports at Tell el-Dab^{ca} come from 'Ezbet Rushdi this was a natural starting point and petrographic thin sections were made from three LPW fragments from 'Ezbet Rushdi and from seven

¹⁰⁴³ ASTON 2004, 31–35, with reference to BIETAK 1991a, 325–326.

¹⁰⁴⁴ *Ibid.*, 35, referring to a new study under way by K. Kopetzky. Cf. now KOPETZKY 2010, 44–46.

¹⁰⁴⁵ MCGOVERN 2003, 108–110.

¹⁰⁴⁶ IDEM 2000.

¹⁰⁴⁷ Cf. MCGOVERN and HARBOTTLE 1997. ASTON 2004, 35–37 points out that a reason for possible misleading results from the NAA tests may also be connected with the method of selecting interesting samples.

¹⁰⁴⁸ Some preliminary results were not included in COHEN-WEINBERGER and GOREN 2004, A Cohen-Weinberger, personal communication.

¹⁰⁴⁹ The NAA results are also referred to in the Catalogue, Figs. 15–29. The results by Huntoon and McGovern are referred to with their JH (Joan Huntoon) and MB (Manfred Bietak) numbers.

¹⁰⁵⁰ COHEN-WEINBERGER and GOREN 2004.

¹⁰⁵¹ *Ibid.*, 70–71, fig. 1.

¹⁰⁵² *Ibid.*, 71.

Fig.	Reg. No.	NAA McGOVERN 2000	Petrography COHEN-WEINBERGER and GOREN 2004
18b.	5226 B	JH838: ?	B3/undet. n. Levant/B
23a.	6114 M	MB028: ?	
18d.	6137 X		B2/n. Israeli coast or Leb. coast/A
19c.	3336 A	MB025: S.Pal.	B2/n. Israeli coast or Leb. coast/A
21a.	6115 F	MB012: S.Pal.	
21b.	6116 B	MB011: S.Pal.	
21c.	6115 Y	MB018: S.Pal.	Unclass./undet.
23d.	6114 L	MB032: Nile!	
16b.	4226	MB027: most sim. to JH083 S.Pal.	B3/undet. n. Levant/B
17b.	5226 G		B3/undet. n. Levant/C
17a.	6114 I	MB022: S.Pal.	
16a.	4284	JH831: most sim. to S.Pal.	
16a.	6114 J (=4284)		B2/n. Israeli coast or Leb. coast/A
19b.	6114 E	MB029: S.Pal.	B3/undet. n. Levant/C
19a.	4223 B	MB016: most sim. to S.Pal.	B3/undet. n. Levant/B
22a.	4406	JH865 S.Pal.	
(No Fig.)	3453 C	MB017: Nile	
22d.	6115 G	MB015: ?	E/e. Gallilee or Jezreel Valley or Yarmuq area or Akkar or mid. Orontes n. of Qadesh/B
(No Fig., red burnished with black band)	2879 G		b2/n. Israeli coast or Leb. coast/A
29b.	4937 D	MB022: S.Pal.	
(No Fig., pTeY)	2069WA3392	JH317: Nile	
27c.	2395WA3595	JH318: Nile	
(No Fig., pTeY)	4108 F	PMG/NAA : "Nile" i. e. Ia/d?	
(No Fig., pTeY)	6114 Q		B3/undet. n. Levant/B! Must then be IV-clay, but it was originally said to be Id.
26c.	4481	JH864: Nile	
(No Fig. tiny, red burnished with black bands)	6115 Z	MB014: S.Pal.	
17c.	7151 B		B1/n.Leb. coast (n. of Tripoli)/A
(No Fig.)	7067 G		B2/n. Israeli coast or Leb. coast/A
23c.	7062 K		Unclass./undet.
22b.	7044 K		A1/n-w. Syria: Ugarit Amuq area or Cil. coast/A.
17f.	5226 A	JH837: S.Pal.	B3/undet. n. Levant/A
15i.	8617 X		B3/undet. n. Levant/A
15c.	8617 A		B3/undet. n. Levant/A
15h.	8617 C/1		B3/undet. n. Levant/A

Tab. 4 NAA results of LPW from Tell el-Dab'a together with the petrographic results

contemporary plain amphorae from the same area. The three LPW fragments were 8617 A (Fig. 15c) from str. e/3, 8617 C/1 (Fig. 15h)¹⁰⁵³ from str. e/1 and 8617 X (Fig. 15i) from str. c and thus from below

the temple of Senwosret III (str. e/1–4) as well as from the time of the temple (str. c). All three fragments belonged to the 'Undetermined Northern Levant', Group B3, with certainty A.¹⁰⁵⁴ i.e. the northern

¹⁰⁵³ Very likely from the same vessel as 8617C2 and 8619A.

¹⁰⁵⁴ The certainty of the following results will only be mentioned when it is not 'A'.

Levant from north of Tel Nami to north of Tell Arqa, but no specific area could be determined. One of the amphorae (body fragments) from str. e was found to belong to the same Group B3 as the three LPW samples. Two other samples from str. e were said to be from the south, Group K 'Northwestern Negev', one, however, with certainty B. The other ('A') is identical to a published jar rim fragment.¹⁰⁵⁵ One from str. e/3 belonged to Group F 'Mount Carmel region' and two from str. e/2 and c as far away as 'Northwestern Syria: Ugarit, Amuq area or the Cilician coast', Group A2.¹⁰⁵⁶ The last from str. d–e belonged to Group E of the 'Akkar plain'. Altogether a very wide range of origins for as few as seven samples of amphorae found in the Rushdi area below the temple and one from the temple level.

The somewhat later LPW material from Area F/I, str. d/2 from the very end of Dynasty XII seems for the greater part to present the same picture. Two of the best LPW examples, a jug with a monochrome red band-zone A (5226 B¹⁰⁵⁷, Fig. 18b) and the long-necked bichrome jug with crisscross bands (4226, Fig. 16b) are both possibly from 'undetermined northern Levant' Group B3 (both B) as is also a bichrome fragment from a similar long-necked jug with butterfly design (5226 G, Fig. 17b), but only certainty C. The only 'certain' (A) Group B3 vessel is the curious band-painted beaker from Pit 53 (5226 A, Fig. 17f). 4226 (Fig. 16b) was 'most similar' to another sample of the Southern Palestine group of the NAA.

Shoulder fragments from a LPW jug/jar with bichrome triangle decoration differ from the other mentioned LPW fragments from Tell el-Dab^a by its very strong red and black colours and the firing of the clay having resulted in a thick grey inner core. This fragment from str. d/1 (6114 E, Fig. 19b) gave the same 'undetermined northern Levant' Group B3 result, but only certainty C. It may thus point to the fact that despite different appearances LPW vessels may possibly derive from the same (wide) area. 6114E, Fig. 19b again belonged to the Southern Palestine NAA group.

The origin of a small fragment (6114J) with bichrome concentric circles from str. d/2 that probably belongs together with the larger fragments from the proposed long-necked jug (4284, Fig. 16a) is slightly more specific: 'Northernmost Israeli coast or

the Lebanese coast' Group B2 and in this case an 'A'. Other very good bichrome LPW examples are known from the northernmost Israeli coast from for example Tel Nami and Megadim so it not impossible that a production was active in that area although a Lebanese origin has traditionally been favoured. This was based on the fact that many of the earlier known examples were from the Lebanese coast. More recent finds from Sidon and Tell Arqa have now added to this. The same 'Northernmost Israeli coast or the Lebanese coast' Group B2 is attributed to the juglet with more unusual red and white band-zones (6137 X, Fig. 18d), the fabric of which is also coarser than the aforementioned long-necked jugs etc. The same fabric and probable source, however, are true of a bichrome jug with band-zone A (3336 A, Fig. 19c), which was one of the samples that came out as belonging to the Southern Palestine group in the NAA test.

Another bichrome fragment of a possible long-necked jug (7151 B, Fig. 17c) was determined to be from further north 'Northern Lebanese coast (north of Tripoli)' Group B1. From the northern part of Lebanon we now have some examples of LPW from Tell Arqa, including a complete jug with a monochrome red band-zone A, similar to the example from Tell el-Dab^a Area F/I, str. d/2 mentioned above (5226 B, Fig. 18b). In order to find more bichrome LPW we still have to look further north on the Syrian coast at Sukas and Ras Shamra.

It is interesting to note that one of the only LPW fragments from a tomb context at Tell el-Dab^a (7044 K, Fig. 22b) is said to come from 'Northwestern Syria: Ugarit, Amuq area or the Cilician coast', Group A1. This piece is a shoulder fragment with monochrome dark brown paint on a combed surface displaying a horizontal wavy band between a thin horizontal band below and a broader band above. The fragment was found in the fill of the large tomb with the mutilated statue of an Asiatic dignitary (F/I-p/19, T. 1).

A later fragment from Area F/I, str. c/2 also shows a possible (B) more remarkable origin. It is a shoulder fragment from an amphora type of jug/jar with a red wavy band and a horizontal band above (6115 G, Fig. 22d), which could derive from 'Eastern Galilee or Jezreel Valley or the Yarmuq area or the Akkar or Middle Orontes north of Qadesh', Group

¹⁰⁵⁵ BAGH 2002, fig. 3.1, cf. n. 97 above.

¹⁰⁵⁶ Also with the addition 'or Cyprus' which seems highly unlikely.

¹⁰⁵⁷ Could not be determined by the NAA test.

E. This is altogether a more inland origin and here it is worth noticing that several jugs and jars with red wavy bands have been retrieved from a Middle Bronze Age tomb at Murek (Fig. 101a–e, g, h) just north of Hama in the Orontes Valley although these are with much ‘smaller waves’ than on the Tell el-Dab^{ca} fragment.

Results from Kabri and Tell Arqa

Three of the band-painted dippers from Kabri have been sampled for petrography and preliminary results have now also been cited from Tell Arqa. The petrographic components of the Kabri jugs are described as only existing north of Akko and, even better, further north of Byblos on the Akkar Plain.¹⁰⁵⁸ This seems to indicate that the jugs were not locally made as would have been expected.

Another, albeit preliminary, result has now been obtained from Tell Arqa where M. Ownby has initiated a project of thin sections and compositional analyses, i.e. petrography, with LPW samples. She has sampled the band-painted dippers (Fig. 80c–e and no. 02/538.3, no illustration), as well as the long-necked jug with the cross-hatched butterfly motif Fig. 80b. Originally the excavator Jean-Paul Thalmann, as stated, considered LPW foreign to Arqa, but the results obtained by Ownby seem to prove otherwise. She places the said samples in her Group 1 and mentions that clay and chalcedony suggest these could be local to Arqa.¹⁰⁵⁹ As Arqa is in the middle of the ‘LPW area’ with Sidon, Beirut and Byblos to the south and Amrith, Tweini and Ras Shamra to the north this would make good sense. Future studies and possibly more samples also from

nearby sites may hopefully confirm the validity of the result.¹⁰⁶⁰

Conclusions

The petrographic analyses of LPW are not all definite, and the number of samples should preferably be larger. Nevertheless, the general picture is a confirmation of a ‘northern origin’ of most LPW from Tell el-Dab^{ca} as opposed to the NAA results. The dissimilarity in the two results may stem from different comparative source material as well as the methods and also the choice of samples that is obviously not often made by the persons who undertake the scientific analyses.

What is perhaps a surprise in the petrography results is the possibility that early LPW examples from ‘Ezbet Rushdi very likely came from, broadly speaking, the same sources as much of the later LPW from Area F/I str. d/2. Group B3 ‘undetermined Northern Levant’, however, is in itself not very specific and it does not argue against a possible Byblos area origin for the earlier imports and a more general ‘Lebanon’ for the later ones. It is also worth noticing that the results of the amphorae gave a more diversified picture of the sources and that the trading network becomes much wider when they are brought into the picture.

Results from Kabri seem to demonstrate that the core area for the production of LPW was further north. More results from sites such as Megadim and Ifshar¹⁰⁶¹ etc. would help to determine whether the LPW from these sites was actually imported from the same sources as in Egypt or whether some was indeed locally produced. The latter would be expected, first and foremost of the simpler monochrome style which is common in, for example, Megiddo and Gesher.

¹⁰⁵⁸ GOREN and WEINBERGER, 440–441, in: KEMPINSKI 2002; tab. 15.1: 24–25; 27.

¹⁰⁵⁹ M. Ownby, personal communication.

¹⁰⁶⁰ Thanks to M. Ownby for the information and permission to mention the preliminary results at this stage.

¹⁰⁶¹ Results from Ifshar, at least, are forthcoming, E. Marcus, personal communication.