

THE LEVANTINE CERAMICS PROJECT 2017 WORKSHOP 1
POTTERY OF CYPRUS FROM THE ARCHAIC TO THE BYZANTINE ERAS
DANISH INSTITUTE OF ARCHAEOLOGY, ATHENS – FRIDAY & SATURDAY, MAY 26TH-27TH, 2017



FRIDAY, MAY 26

Where we're at with the LCP – *Andrea Berlin*

In these welcoming remarks I emphasized that the LCP is not one person's project, or something only for people working right now – but rather that it belongs to all of us, and, we hope, will continue to be something for students and scholars in the future. I demonstrated some of the site's features, especially the comparisons tab, and said that we want to develop more features that will allow comparative and analytical study, in order to make good use of the increasing amounts of information on the site.

Petrography and Production

- Paula Waiman-Barak: Cypriot petro-fabrics and petrography

Paula summarized work done in conjunction with Anna Georgidou and Ayelet Gilboa, on defining the origins of the main decorated Iron Age wares – White Painted, Black-on-Red, and Bichrome. She did petrography on Cypriot imports found at the site of Dor, on the northern coast of Israel, as well as on reference material that Anna assembled from five sites in Cyprus – Kouklia, Amathus, Idalion, Kition, and Salamis. Paula identified and defined several distinct Cypriot petro-fabrics, connected them with specific regions, and demonstrated that examples of the same ware were made from these different petro-fabrics. These analytical results agreed with stylistic conclusions that Anna made, meaning that it provides evidence for identifying regional versions of the main Cypriot Iron Age decorated wares. Gjerstad himself predicted this might be the case. While he did not think he had found sufficient data to discuss regional patterns, he wrote, “in the future the characteristics of the Cypro-Geometric and Cypro-Archaic local pottery styles ... will be ... determined, [making] the complexity of the cultural pattern ... stand out with all lucidity.”

- Joanna Smith: Iron Age kilns and production sites

Joanna summarized the evidence for possible production sites in the Iron Age. No kilns have been found, so these suggestions are based on scattered, scanty evidence. Some vessels found in a large bothros at Polis have firing irregularities that might suggest they are local products. Differences in stylistic details between white painted vessels found at Lapithos, Kythrea, Kition, and Paphos suggest that these were made in each locality. It does seem that Gjerstad's distinctions, which he considered chronological, may instead be regional – that is, that different styles are contemporary but just made in different places around the island.

- John Lund: Overview of Hellenistic & Roman-era production locales

John echoed most of Joanna's points: no kilns and scattered evidence, yet by collecting information from inscriptions, epigraphy, mis-firings, etc. it is possible to suggest certain localities where production occurred. For the Hellenistic and Roman periods, the evidence indicates production at the site of Ayios Giorgos (PASYDY) in Nicosia, as well as Salamis, Kition, and especially Nea Paphos.

Tablewares, part 1: Roman

- Mark Jackson: LRD-E kilns in southern Turkey

Mark presented information from his 2012 article in *Anatolian Studies*, "[Primary evidence for Late Roman D Ware production in southern Asia Minor: a challenge to 'Cypriot Red Slip Ware'](#)," of the discovery of seven kiln/production sites for LRD/"Cypriot Red Slip" vessels. The kilns are in the region of southern Pisidia that lies near the confluence of the Aksu and Kuçukaksu rivers. The table below shows the main forms produced, along with their quantities. Mark noted that there was a wide variation in vessel color, from red to brown and purple, as might be expected at a kiln site where there are many wasters. Since however the wide variety of colors has been noted in publications about LRD/CRSW transported around the Levant, he suggested that this was part of the manufacturing technology and may be actually on purpose and desirable, because it was more similar, for example, to bronze vessels that also show a variation in color finish. This interpretation is substantiated by the fact that many of the vessel forms and decoration imitate metal vessels. While some have tried to differentiate the red material from that in other colors, he does not think, therefore, that we should use words like "imitation" and "derivative" to describe these multiple productions, but rather recognize that each is a legitimate production in its own right.

Form number	EVE	No. of rim sherds	Rim weight (g)	% total EVE	% total rim weight	% total no. of rim sherds
Hayes Form 9B (fig. 16)	6,614	1,021	40,615	28.84	30.19	29.19
Meyza Form 6 (fig. 18.1-3)	3,184	474	5,415	13.88	4.03	13.55
Hayes Form 8 (figs 13 and 14)	3,216	440	14,567	14.02	10.83	12.58
Hayes Form 2 (figs 10 and 11)	2,497	385	6,991	10.89	5.20	11.01
Hayes Form 10 (fig. 17.4)	1,683	291	20,743	7.34	15.42	8.32
Meyza Form K5.2 (fig. 15)	1,764	276	12,860	7.69	9.56	7.89
Hayes Form 7 (fig. 12)	1,253	193	17,663	5.46	13.13	5.52
Quantified rim forms with less than 5% representation	2,722	418	15,662	11.88	11.64	11.94
Totals	22,933	3,498	134,516	100	100	100

Table 1. Table of rim-sherd quantification for POI261, Gebiz, Kadurgürü Mevkiisi (M. Jackson and Newcastle University team). EVE = estimated vessel equivalent

Table from Jackson *et al.* 2012: Table 1, page 110

Mark also reported informally on unpublished preliminary PXRf analyses carried out with E. Photos-Jones (Glasgow) on 65 sherds from four of the Pisidian kilns along with flakes from 11 LRD vessels selected by P. Armstrong and S. Gabrieli from Nea Paphos. The preliminary analyses suggested both potential geographical differentiation and grouping within the Pisidian kiln sites. There was also interesting variation in the sherds found at Paphos with some recording close similarity to those from the Pisidian kilns in the Gebiz area and others (four of eleven) showing a different signature which may reflect another different source of production altogether. This preliminary work calls for more research on the topic with a much more comprehensive sample and Mark invited colleagues with LRDW material to contact him to collaborate in future research to compare samples from the Pisidian kiln sites with samples of material from sites where it was found both on Cyprus and beyond.

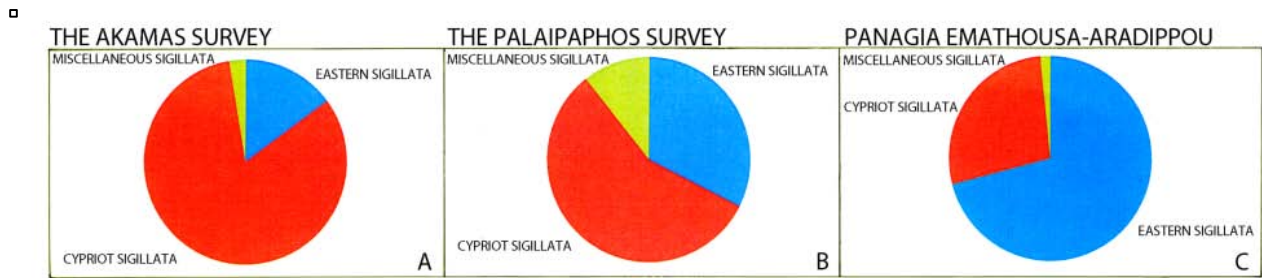
- Henryk Meyza: LRD-E/“Cypriot Red Slip Ware”

Henryk agreed that we should now understand the production of this late Roman fine ware as occurring at multiple localities, and encouraged a greater attention to differences in shape and distribution so as to refine internal chronologies and demonstrate how tastes varied. To that end, he has submitted 12 vessels, with drawings and photographs, found at Paphos, Maloutena. Some are forms that he believes are specific for Cyprus: H 1/3C, K1, H8A, H11C-D, and H12. He has also turned his attention to XRF-WD analyses, conducted in Berlin, of LRD samples from Paphos and Kourion. The results suggest that there existed “local” source variations which seem not to result from deposition conditions but may instead be chronological. He has more material from Kourion that he hopes to be able to submit to the website soon; and he encourages others to add still more examples from sites in Cyprus and Anatolia, and also Palestine. In this way we may eventually be able to compare the results of scientific analyses with typological studies, and so gain a better sense of the meaning of the variations that we see.

- John Lund: Cypriot Sigillata

John summarized the complicated, and somewhat circular, history of defining and naming this ware as well as attempting to identify its origin and production venues. Based on both scientific analyses and also distribution patterns, the origin has been postulated as: Pamphylia (Gunneweg *et al.* 1983), Cyprus (Hayes 1986; ‘Amr 1987; Meyza 1995), between Polis and Paphos (Rautman *et al.* 1996), in northeastern Cyprus (Elaigne 2002), and Nicosia/Kafizin (Hunter 2007). The most recent study (Renson, V., Slane, K.W., Rautman, M.L., Kidd, B., Guthrie, J. & Glascock, M.D. “Pottery Provenance in the Eastern Mediterranean using Lead Isotopes,” *Archaeometry* 2015 Doi: 10.1111/Arcom.12217) also asserts an origin between Polis and Paphos – but the “control” evidence used in this study is Cypriot Red Slip ware from Paphos, which of course might actually be Pisidian!

Three surveys, from northwestern, southwestern, and southeastern Cyprus, show very different amounts of Cypriot Sigillata vis-à-vis ESA, with Cypriot Sigillata accounting for the huge majority in the NW, a little over half in the SW, and about one-third in the SE (where ESA is much more prevalent):



John drew three conclusions:

- 1) The interpretation of scientific clay analyses is not always as secure as we would like to think. This also applies to the geographical source of Eastern Sigillata A.
- 2) If Cypriot Sigillata was actually manufactured in Cyprus, it was almost certainly produced in the Western Part of the island, presumably in the area of Nea Paphos, but
- 3) It cannot be excluded that the ware was produced in Pamphylia or somewhere else in Southern Anatolia.

He also suggested that another angle of evidence for comparison might be with vessels of Late Bronze Age Base Ring ware, which isotope analyses link to a source in southwestern Cyprus – although of course it could be that Base Ring vessels were *also* produced in southern Anatolia.

Tablewares, part 2: Hellenistic

- Andrea Berlin: Cypriot Late Hellenistic Gray Slip Ware

I presented this ware, which I submitted to the LCP on behalf of Kathleen Slane, who was the first to identify it as a discrete production: <https://www.levantineceramics.org/wares/cypriot-late-hellenistic-gray-slip-ware>. She had suggested that it was a kind of predecessor to, or experimental variant of, Cypriot Sigillata. I asked those present if they would indeed consider this a separate ware, and if so what name should it have (this name is a version of the one given by Kathleen). Henryk was not convinced it ought to be a separate ware, and John pointed out that in terms of chronology, it did not seem in fact to be earlier – since Cypriot Sigillata is already attested by c. 125 BCE on Cyprus. Ewdoksia said that she had a lot of this at Paphos, and although she had not identified it as something different than Cypriot Sigillata, she could see doing that. She suggested that the name be changed to clarify its relationship, something like “Cypriot Sigillata, gray variant.” We all agreed that we should pay attention to finds of this material, and keep track of new information on chronology so as to decide if it was really earlier, or simply a kind of alternative version.

- Peter Stone: Cypriot Hellenistic brown slip & Hellenistic red slip wares

Peter summarized recent discussions with Sandrine Elaigne about identifying different early and middle Hellenistic Cypriot fine wares. We all wonder how to evaluate distinctions in color and texture of fabrics and slips, and how to use those visual clues to decide how many different wares there really were. For the moment Peter and Sandrine have identified two such wares on the LCP:

- Cypriot Hellenistic brown slip ware (originally called Gray-Brown Cypriot ware, and still labeled as such in the URL): <https://www.levantineceramics.org/wares/gray-brown-cypriot-ware>;

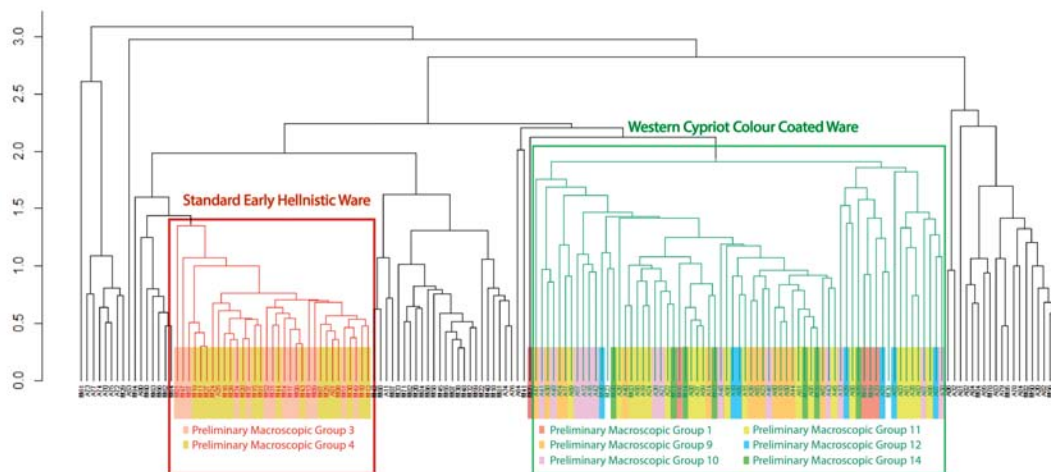
- Cypriot Hellenistic red slip ware: <https://www.levantineceramics.org/wares/cypriot-hellenistic-red-slip-ware>

- Edyta Marzec: Western Cypriot Colour Coated & Standard Early Hellenistic Wares

Edyta presented the results of her dissertation research, in which she analyzed a range of Hellenistic fine wares using an array of techniques: macroscopic and typological study; refiring tests; WD-XRF; petrography; NAA; and SEM. In the end she identified two main groups. The first, “Western Cypriot Colour Coated Ware,” was made in the Paphos region, possibly by a number of workshops using a number of raw material sources in the wider area and slightly varied recipes over the term of three centuries of production.

The second, “Standard Early Hellenistic Ware,” uses the name from Hayes’ 1991 publication of the pottery from the House of Dionysos in Nea Paphos (Hayes 1991), but probably comes from the region around Kition. She noted that vessels of “Standard Early Hellenistic Ware” are characterised by higher technological standardisation, and suggested that it is the equivalent of “Hellenistique chypriote” from Salles’ 1993 Kition publication and “Gray Brown Cypriot Ware,” from Berlin and Stone’s 2016 publication of the finds from ‘Akko in Israel. These two groups represent different manufacturing technologies and seem to correspond to two distinct production systems.

□



This dendrogram shows the results of cluster analysis of chemical data of 164 pottery samples from Nea Paphos performed on the concentrations of 25 following elements: Na, Mg, Al, Si, K, Ca, P, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Rb, Sr, Y, Zr, Ba, La, Ce, Nd, and Th.

In discussion, some of us did not think that “Standard Early Hellenistic ware” looked sufficiently similar to “Gray Brown Cypriot” (which Peter and Sandrine have re-named “Cypriot Hellenistic Brown Slip ware”) to consider them different names for the same thing. Compare, for example, these two vessels:

- <https://www.levantineceramics.org/vessels/k09p196>
- <https://www.levantineceramics.org/vessels/pap11-i-14-p24>

So for the moment it seems that we have yet *another* early-middle Hellenistic table ware – but of course the “Gray Brown”/“Brown Slip” ware might not actually be Cypriot!

- Barak Monnickendam-Givon: identifying Cypriot imports in the southern Levant

Barak presented possible Cypriot imports from three sites in northern coastal Israel: ‘Akko; Ramat HaNadiv; and Dor. The vessels include mortaria in two different wares, which he has submitted to the LCP so that people could read and comment on them:

- <https://www.levantineceramics.org/wares/mortaria-light-ware-cypriot>;
- <https://www.levantineceramics.org/wares/mortaria-crude-brown-ware>.

Pam Gaber said that this crude brown ware seemed like one the most common wares at Idalion, and was used for many sorts of vessels, not only mortaria. It would be good to compare the petrographic thin-section of the example found at Dor (<https://www.levantineceramics.org/vessels/dor-l-17018-b-170190-4>) with some of the petrographic samples that Paula identified as coming from the area near Idalion.

Other vessels from Dor that Barak has put on the LCP that may be Cypriot are:

- lamp: <https://www.levantineceramics.org/vessels/dor-l-17853-b-178011-4>
- mortarium: <https://www.levantineceramics.org/vessels/dor-l-19505-b-197026-9>
- bowl, possibly Cypriot Hellenistic Red Slip ware: <https://www.levantineceramics.org/vessels/dor-l-19505-b-197026-9>
- unguentarium: <https://www.levantineceramics.org/vessels/dor-l-08d4-335-b-08d4-3372-5>

Plain/utility/coarse wares

- Agata Dobosz: Hellenistic amphora fabrics from Nea Paphos and Kourion

Agata has submitted to the LCP five distinct Cypriot transport amphora wares, dating from the early Hellenistic through late Roman times. She identifies one of these as local to Kourion and four as local to Paphos. She has provided macroscopic descriptions and images, some from her own research and some from earlier publications. These are:

- <https://www.levantineceramics.org/wares/transport-amphorae-kouriote-fabric>
- <https://www.levantineceramics.org/wares/transport-amphorae-nea-paphos-agora-fabric-28>
- <https://www.levantineceramics.org/wares/transport-amphorae-nea-paphos-agora-fabric-48>
- <https://www.levantineceramics.org/wares/transport-amphorae-nea-paphos-agora-fabric-9>
- <https://www.levantineceramics.org/wares/transport-amphorae-paphos-agora-fabric-21>

She notes that for several of these wares, amphoras of different shapes were made, suggesting several ateliers at work in these sites.

- Małgorzata Kajzer: Hellenistic lamps from Nea Paphos

Małgorzata presented the results of her dissertation research on Hellenistic lamps found at various excavation areas of Nea Paphos. She has identified five types and in some cases linked them to wares on the LCP.

- EH plain ware saucer lamps;

- EH wheel-made watch-shaped lamps, linked to Standard Early Hellenistic Ware;
- EH wheel-made lamps, linked to Western Cypriot Colour Coated ware;
- LH mold-made lamps, also linked to Western Cypriot Colour Coated ware;
- ER mold-made lamps, possibly a continuing production of LH pink powdery ware (<https://www.levantineceramics.org/wares/cypriot-late-hellenistic-pink-powdery-ware>).

The addition of lamps to the site is very welcome. As people add more examples of lamps, and also, when possible, associate them with specific wares (and even petro-fabrics), we will begin to build up a picture of varying modes of production in different times and places, and so start to see when such items were specialty products and when they were made alongside other types of pottery.

- Joanna Smith: Plain White and Plain Light wares

Joanna presented six utility wares that she had submitted to the LCP:

- <https://www.levantineceramics.org/wares/cypriot-plain-white-iron-age>
- <https://www.levantineceramics.org/wares/cypriot-plain-kitchen-iron-age>
- <https://www.levantineceramics.org/wares/cypriot-white-painted-kitchen-iron-age>
- <https://www.levantineceramics.org/wares/cypriot-lightly-fired-coarseware-iron-age>
- <https://www.levantineceramics.org/wares/cypriot-heavy-and-coarse-iron-age>
- <https://www.levantineceramics.org/wares/cypriot-micacious-iron-age>

She then led a discussion about how people can use the LCP to help better define these categories. Increasingly the evidence for pottery production on the island indicates that the same (or very similar) wares were produced in multiple places. This means that Gjerstad's typological system (1932, 1948, 1960), in which he categorized vessels into wares according to their surface treatment, should probably be reworked to define broad ware families with regional variations. The wares already submitted are an initial suggestion; we should work to identify meaningful regional and chronological sub-families. One way to do this is to continue to add examples so that we can readily compare vessels from different places. Another is to expand the information about these (and other) wares on the site by writing out explanations of how one has identified and defined a given ware, so that it is easy for others to visualize and identify.

SATURDAY, MAY 27

Iron Age & Classical decorated wares

In this session, Joanna Smith picked up where we left off on Friday, and extended the discussion about ware definitions and names to the decorated wares of the Iron Age and Classical period. As with the plain wares, study since Gjerstad's time has made it clear that differences interpreted by him as being chronologically significant are more likely the result of regional differences. Joanna noted that the results of analytical work reported on by Paula (in the first paper) provided strong support for this idea (which she, Joanna, had proposed in *Art and Society in Cyprus from the Bronze Age into the Iron Age* (Cambridge University Press, 2009). For this reason, Joanna advocates for broad ware family names, as the eight that she has submitted to the LCP:

- <https://www.levantineceramics.org/wares/cypriot-white-painted-iron-age>
- <https://www.levantineceramics.org/wares/cypriot-bichrome-iron-age>
- <https://www.levantineceramics.org/wares/cypriot-bichrome-red-iron-age>
- <https://www.levantineceramics.org/wares/cypriot-black-on-red-iron-age>
- <https://www.levantineceramics.org/wares/cypriot-brown-gray-burnished-iron-age>
- <https://www.levantineceramics.org/wares/cypriot-matt-black-iron-age>
- <https://www.levantineceramics.org/wares/cypriot-red-slip-iron-age>
- <https://www.levantineceramics.org/wares/cypriot-trichrome-iron-age>

In discussion, everybody agreed that when submitting a ware, it would be helpful to use the “General Information” field to add comments about regional patterns for specific shapes and decorative approaches, in order to begin to refine these ware families and develop a sense of who was making what, and when. As an example, during the discussion Joanna added the following explanation to the “General Information” field for Cypriot White Painted ware:

Cypriot White Painted Ware is a classification that draws on Einar Gjerstad's typological system (1932, 1948, 1960) and refers to a ware that is defined by the surface treatment of a vessel. The use of black paint on an otherwise undecorated (no slip, wash, or similar covering) surface is common throughout the Cypro-Geometric, Cypro-Achaic, and Cypro-Classical periods and continues into the Hellenistic period. It finds earlier origins in the latter part of the Late Bronze Age (Cypriot White Painted Wheelmade). There are many different fabrics, shapes, and decorative schemes that are included within this ware family. Gjerstad divided White Painted ware into seven types (Types I-VII), which take all of Cyprus as one large group, are based mostly on vessels from tombs, and are largely differentiated by shape with. Where one of his Types appears to be meaningful, this should be entered into the vessel information under "shape type" with the appropriate reference to his system provided in bibliography for that object. As meaningful regional and chronological sub-families of this ware are identified, they should be added with descriptions of how those groups were identified and how they are defined.

She also added a very similar explanation to the ware page for Cypriot Bichrome (Iron Age).

Cooking Wares

- Smadar Gabrieli: ER, LR, Byzantine, and Medieval cooking wares

Smadar presented her current Marie-Curie Fellowship project in collaboration with Kristina. In this project she will establish a typology and apply various analytical techniques in an attempt to define the development of the hand-made ceramics industry between the mid-7th and the 12th centuries. The aim of this study is to help narrow the seeming gap in occupation in Cyprus between the end of the Roman period and the beginning of the Frankish era.

Based on her work for the project so far, she has submitted two wares to the site:

- <https://www.levantineceramics.org/wares/lr-byzantine-cypriot-handmade-coarse-ware>
- <https://www.levantineceramics.org/wares/cypriot-byzantine-and-medieval-hand-made-ware>

She also tentatively identified one petro fabric group related to these vessels:

- <https://www.levantineceramics.org/petrofabrics/handmade-paphos-area-1>
- Kristina Winther-Jacobsen: NW Troodos Hellenistic kitchen ware

Kristina has submitted to the site three wares defined in a study undertaken near a mining area in the Troodos about ten years ago:

<https://www.levantineceramics.org/wares/northwestern-troodos-hellenistic-kitchen-ware>

<https://www.levantineceramics.org/wares/northwestern-troodos-tile-ware>

<https://www.levantineceramics.org/wares/northwestern-troodos-amphora-ware>

She also submitted five petrographic thin sections, one from the tile ware and four from the amphora ware. These should enable future researchers to associate these wares with other Troodos-based productions.

- Monika Więch: Cooking Wares from Nea Paphos

Monika described three cooking wares dating to Classical, Hellenistic, and early Roman times represented by vessels recovered in 2014 and 2016 from excavations in the so-called “Hellenistic House” in Nea Paphos. She has submitted 23 of these vessels to the LCP, providing a range of shapes and types: deep stew pots; casseroles; cooking jugs; baking dishes; grill fragments; and a cooking pot support (lasana). She has also submitted two wares:

- <https://www.levantineceramics.org/wares/cypriot-cooking-ware-early-roman>
- <https://www.levantineceramics.org/wares/aegean-cooking-ware>

She said that it is possible to visually distinguish between the late Classical, Hellenistic and early Roman cooking wares, thus offering the possibility of determining the date of a vessel from body sherds as well as diagnostic parts such as rims and handles.

- Kamila Nocon: Western Cyprus Cooking Wares

Kamila also presented information about cooking wares, based on work she is doing for her dissertation on material from excavations from the Agora of Nea Paphos. Close macroscopic examination has allowed her to distinguish between four distinct productions dating to the early Hellenistic, late Hellenistic, early Roman, and middle Roman eras. She has submitted the late Hellenistic ware to the LCP, along with three vessels: <https://www.levantineceramics.org/wares/western-cyprus-cooking-ware>.

There are two visually distinct characteristics by which these wares can be distinguished. First, the surfaces of late Hellenistic times have lime “pops” or voids whereas those dating to early Hellenistic times are smooth. Second, the matrix of vessels of early Roman times have “sparkle,” possibly from mica, whereas those from middle Roman times do not. Kamila plans to submit samples of these wares for further analytical study to better define and distinguish them.

Final Discussion: Next steps for LCP-Cyprus

We had a robust final discussion, in which people offered a number of excellent suggestions to improve the site. These included the following:

1. Re-add “Submitted by: [user name] + date” to every display page. Put it in the blue column on the left side of the screen, just beneath “Contributors.”
2. On the submit page for both wares and petro-fabrics, add a sentence to the “General Information” field to encourage people to provide details about earlier studies, alternative names, and other related information.
3. Create a new field for ware submission and display: “Earlier/Alternative Names.” Having such a field would make it easier for people to find information on the site, since a search by an older name would then bring up a page with the new name.
4. Change name of “Kilns” to “Pottery Production Sites.” In conjunction with this, re-think the shape category of waster. Currently it is not possible to specify what sort of vessel a waster might be. Should “waster” be a check-box, making it an attribute of a shape?
5. Period names and dates: the edit function is not working. We decided to change the designations for Hellenistic Cyprus, but we couldn’t do it. We want to change Cyprus Hellenistic I and II designations to Early, Middle, and Late Hellenistic, with the dates 310-225 BCE, 225-150 BCE, and 150-30 BCE.
6. Review the issue of inheriting information. Information submitted with an entry initially ought to be inherited when there is an another submission to the same vessel number. For example, when a vessel is submitted, and then a petrographic sample, the petrographic submission page should inherit all details *already* submitted about the vessel, such as site name, country/region, date, period, etc.
7. Update instructions, tool tips, and display pages to make it clear where and how users & contributors can edit information (and see below, #8). Also make clear that contributors can not *delete* information; for that they must make a request to a site administrator.
8. Update on editing:
 - a. There should only be two possible places to edit: on an editing page and when in comparisons. Comparison in-line editing is fine as is. It would be nice to be able to edit other things, but it’s not a priority.
 - b. Change name of Browse/Edit to Browse – because it will no longer be possible to get to an editing page from browse.
 - c. Editing on the actual display page:
 - i. remove all in-line editing, which should make all pencil icons go away.
 - ii. ensure that there is a button saying “Edit Information” at the top right of **each section box**. This includes boxes that are blank, meaning there is not yet any information provided. The only exception are images, which have their own gear icon.

- iii. when a user clicks on the “Edit Information” button of a given section, the LCP should navigate to that specific step on the editing page.
 - iv. Currently you can not directly edit associations. The “Edit Information” button for Associated Information only appears when there is information filled in. Then, when you click on “Edit Information,” the navigation takes you to the editing page for the associated item, rather than to the step for “Associations” in *that specific item’s* editing sequence. For example, if the user is on a page for Ware ABC and clicks the “Edit Information” button for “Associated Kilns,” the LCP now navigates to the editing page for the *kiln*. We want it to go to the edit mode for Ware ABC, and directly to the step for Associations.
9. Add a way for users to search for and collect all material from the same archaeological context.
10. **NEW!** Create way to add additional analytical data. At present the only analytical data that can be added is petrographic, but there are many other forms of analysis, such as NAA, WD-XRF, IR, and SEM. Two possible ways to create this new ability:
- a. Change the current page for “Submit a Petrographic sample” to a general “Submit an Archaeometric sample,” and then add a new step into that submission.
 - i. advantage: easier to enter information about multiple forms of analysis for the same sherd because all in one step
 - ii. disadvantage: complicates petrographic submission; requires re-doing wording and other aspects of the current petrographic submission, display, & browse pages; has implications for bulk upload
 - b. Create a brand new page for “Submit an Archaeometric sample” (and so keep petrographic submission as is). A new page would look similar to “Add a vessel illustration.”
 - i. advantages: cleaner to implement because don’t need to re-do existing petrographic pages; provides possibility for bulk upload of other sorts of analytical results; makes it easier to isolate results of specific sorts of analyses.
 - ii. disadvantage: requires an extra submission page if there are multiple forms of analysis for the same sherd.
 - c. Whichever of the above, the page would have six fields:
 - i. Vessel registration number (= the primary excavation vessel number)
 - ii. Lab sample number
 - iii. Type of analysis (this would be a fixed drop-down menu)
 - iv. Name of Laboratory (this would be a short text field)
 - v. Key Results (this would be a text box)
 - vi. Add an image. This would allow somebody to upload multiple images and/or other illustrative material such as .doc or .pdf files, an excel spread sheet, .jpg and/or other picture file.

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