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## 2023 Addendum to the Rough Cilicia Kiln Site Ceramics (Syedra, Delice, Biçkici, and Antiochia ad Cragum): An Update to the Kiln Sites

Nicholas K. Rauh  
*Purdue University*, [rauhn@purdue.edu](mailto:rauhn@purdue.edu)

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## **2023 Addendum to the Rough Cilicia Kiln Site Ceramics (Syedra, Delice, Biçkici, and<sup>1</sup> Antiochia ad Cragum): An Update to the Kiln Sites**

This addendum summarizes the ceramic remains recovered by the Rough Cilicia Archaeological Survey Project at four posited amphora kiln sites in the survey area: the Syedra Kiln Site, the Biçkici Kiln site, the Antiochia ad Cragum Kiln Site, and the Delice Kiln Site. All four sites were identified early on during the survey (1995-1997). The survey team conducted grab collections and triaged dozens of sherds recovered by 1997, before returning the bulk of these fragments to the field. A representative sample of the amphora fragments together with context ceramics for each site was conserved at the Alanya Archaeological Museum. In 2003 the survey team conducted a magnetometric survey of the Biçkici and Suedyra kiln sites with minimal results. Due to the longevity of the survey (1996-2011) members of the survey team, particularly Rauh, Dillon, Autret, and Kızıllarslanoglu, conducted repeated visits to the sites and recovered additional diagnostic fragments as they surfaced. These visits occurred almost annually, with intensive inspections occurring in 2008 and 2011. The results of these efforts were assembled recently by C. Autret in her PhD dissertation: *La Vigne, le vin et les amphores en Cilicie à l'époque romaine. Production et diffusion du Ier S. av. J-C au IVe S. Apr. J-C* (Paris, University of Paris-Sorbonne, 2015). In September 2021, Rauh inspected the remaining collections from the kiln sites stored in the Alanya Archareological Museum. He took photographs, Munsell colorations, measurements, and descriptions for each of the sherds he inspected. This effort marks the conclusion of his work with the stored pottery at the museum. In 2022, the RCSP Ceramics Study Collection was transferred from the museum to the depot of the University of Nebraska Excavation Depot at Antiochia ad Cragum (Güney Village), where it will be made available to members of the excavation team. The results of Rauh's efforts in 2021 form the basis of the Rough Cilicia Kiln Sites Addendum Dataset. In this description, he summarizes what is known about the kiln sites themselves and the amphora types they generated during the Roman Era. Many participants have played a role in this research, including Caroline Autret, Hatice Asena Kızıllarslanoglu, Matthew Dillon, Richard Rothaus, Kathleen Slane, Elizabeth Lyding Will, John Lund, Stanislav Pejisa, Kim Leaman, and Jason DeBlock. A list of previous publications by the project regarding the kiln sites can be accessed [through this link](#).

### THE SYEDRA "KILN SITE."

During a preliminary visit in 1995, museum authorities at the Alanya Archaeological Museum brought to our attention the existence of what appeared to be the remains of a kiln site on a beach near the mouth of a small river (the Yeşil Öz River). The site is situated about 8 kilometers south

of the ancient site of Syedra. The landscape has changed considerably since our earlier visits.<sup>2</sup> Today, the modern highway turns east along the landward slope of the coastal ridge. To visit the kiln site one must avoid the turn inland and continue a few hundred meters straight ahead along the old coast road. The abandoned hotel/campground that once abutted the site has been replaced by the new Lord Marina Hotel and the kiln site must be accessed via the hotel complex. Apart from the erection of a pre-fabricated house on a raised platform set back from the beach, the site remains relatively undisturbed.



Figure 1: View of the Terrain at the Syedra Kiln Site, Looking South.





Figure 2: Architectural Fragment of Tile Floor Set in Concrete Foundation Seen at the Syedra Kiln Site in 1996.



Figure 3: Structural Remains along the Southern Edge of the Syedra Kiln Site in 1996.

It appears as a flat open terrace (fig. 1), situated between the Lord Marina Hotel on one side and<sup>4</sup> the Yeşil Öz River on the other. The terrace (approximately 67 m. N/S by 43 m. E/W) stands more than a meter above the beach out front and 3 meters above the neighboring hot houses on the river bank to its south. It was formerly retained on its southern side by the remains of an ancient wall. Remains of ceramic floor tile, set in concrete, were also visible amid scattered debris (figs. 2-3). In July 1996, the field team conducted an intensive grab collection at the site, gathering a "triaged" collection of its representative ceramic forms. Members of the survey team have revisited the site multiple times to gather additional context pottery. The proximity of the site to the sea results in repeated storm damage that reveals new fragments on a consistent basis. For example, in 2003 the team found the follis of the Roman Emperor Maximinus Daia II (305/310 AD) lying on the surface (fig. 4). That same year the team attempted an unsuccessful magnetometric survey of the terrace zone that proved inconclusive results (fig. 5). It must be stressed that no surface remains capable of verifying the existence of a kiln structure are visible. In addition to the limited elements mentioned above, our conclusion that an ancient kiln stood here is based on the discovery of misfired and vitrified material including fragments of kiln lining and roof tiles (fig. 6). Among the recovered fragments was a deformed half worked amphora toe that was apparently fire hardened (fig. 7). Items still usable but overfired gray and metallic and also likely to be products of this site are two shapes of basin rim, several loom weights or heat pads, a stewpot with everted rim, and diagnostic fragments of at least four types of amphora.



Figure 4: Follis of Roman Emperor Maximinus Daia II (305/310 AD), found at the Syedra Kiln Site in 2003





Figure 5: Levent Vardar Conducting the Magnetometer Survey at the Syedra Kiln Site in 2003



Figure 6: Overfired Ceramic Fragments and Kiln Lining from the Syedra Kiln Site



Figure 7: Fragments of Amphora Toes from the Syedra Kiln Site, Including One That is Deformed and Half Worked (bottom row, middle)

Neither the fabrics nor the shapes are uniform. The basins, the loom weights, and some amphoras seem to share a fine, reddish yellow fabric (5 YR 6/6) with abundant, minute white inclusions and many tiny irregular voids; sparse angular or splintery white grains are also present and the surface is micaceous. The biscuit is fired a single color throughout its thickness. Some very thick walled amphoras and some of the Zemer 41 amphoras (see below) are similar, except they seem grittier, have a gray core, and a soapy texture; there are red and black grains among the larger size white inclusions. The latter is the fabric labelled “West Cilicia Zemer 41 fine” in the study collection.

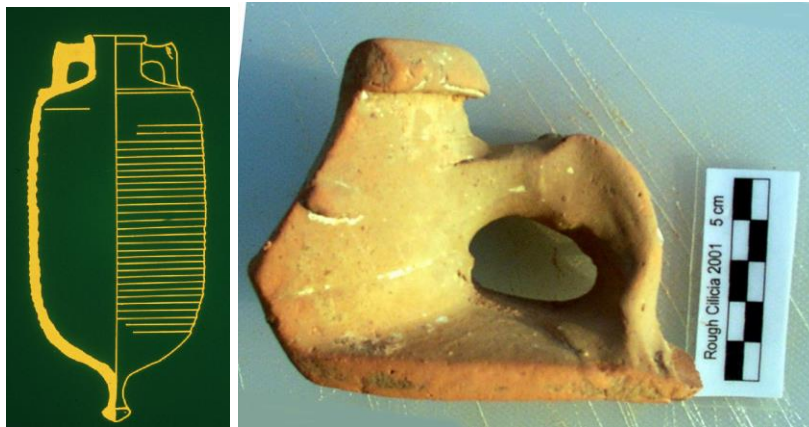
Identified "Syedra Kiln Site" forms:

Most of the basins are carefully potted, of a shape and fabric common throughout the survey zone. They are identified in the RC Study Collection as the West Cilicia Flanged Rim Basin, West Cilicia Upturned Rim Basin, West Cilicia External Flange Basin, and upturned concave rim basins (SC 009, SC 011, and SC 015). There is also a misfired everted rim stewpot (2nd-3rd century type) among the basins. The loom weights are rounded, with alternating deep concentric grooves and ridges on the front and a flat-surface back (SC 067c). They are relatively thick (2-3 cm.) and appear to exist in different sizes (c. 16, 12, and perhaps 10 cm. in diameter). One of the larger sherds collected in 1996 has a ridged handle attached to a neck and shoulder, with wavy-line decoration



appearing on the neck above and below the handle attachment. These have been identified in the<sup>7</sup> Study Collection as the Rough Cilicia Decorated Table Amphora (SC 198a).

The amphora fragments (rims, handles, shoulders, body sherds, and toes) point to the production of four types of transport jars at the site: the Pinched Handed Amphora (Zemer 41; fig. 8) that was produced throughout this region, a fractional version of the same form (the Agora M239; fig. 9), the Pamphylian amphora (fig. 10), and a fourth form labeled by our team the Syedra Type Amphora based on the numerous fragments that were recovered at this site (fig. 11). The first three have been discussed repeatedly in our publications. The identification of the last mentioned form is a recent development and warrants further discussion.



Figures 8-9: Profile Illustration of a Pinched Handed Zemer 41 Amphora (courtesy E. Lyding Will); Upper Portion of a Fractional Pinched Handed Amphora (Agora M 239) from the Syedra Kiln Site

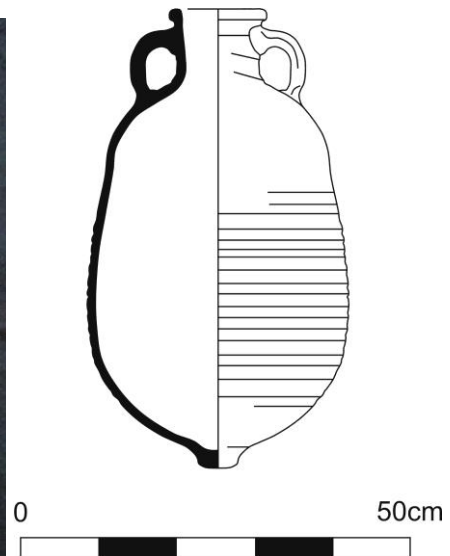


Figure 10: Toe Fragment of Pamphylian Amphora from the Syedra Kiln Site with Profile Drawings by Kim Leaman





Figure 11: Upper Portion of Syedra Type Amphora Recovered by Alanya Archaeological Museum Staff during Salvage Excavation in Alanya



Figures Twelve and Thirteen: View of Interior Beveled Rim of Syedra Type Amphora Found in Alanya; Profile Drawing of Agora M273 Type Amphora

The Syedra Type Amphora exhibits a large thickened triangular rim, slightly beveled on outside. There is an incised line or groove on interior top of rim, possibly for a lid. The ridged strap handle attaches to the neck just below rim. The neck is tall and widest at the rim, tapering inward to the

join at the shoulder. The shoulder is rounded. The handles are broad and down turning with two<sup>9</sup> finger grooves on top. Lacking an intact form, team members were unaware at first that the grooved handles and incised rims belonged to the same form. In 2015 we were shown an intact fragment of the upper portion of this jar (figs. 11-12). The fragment was recovered by the archaeologists of the Alanya Archaeological Museum during a salvage excavation conducted in Alanya. Not only does this fragment confirm the association of the large ridged strap handles and grooved rims, but it demonstrates that the shoulder and possibly the entire form is rounded. Team members remain divided about the identification of this amphora, Autret (2015: 165) for example, has associated our finds with the Agora M273 type amphora (fig. 13), which is believed to have been produced somewhere in the general region. Rauh is concerned that the slope of the shoulder is indicative of a round form, resembling and perhaps imitating the Brundisian ovoid amphora. In view of the fact that such a form is unknown in the region, Autret's argument that the Syedra Type Amphora represents a variant of the Agora M273 amphora possesses greater merit. Regardless, the form is commonplace in the survey area and occurs in a whiteware fabric as well as the Biçkici fabric, where similar fragments of the form have been recovered.

Our original discussion of the context pottery indicated that the primary phase of the kiln site occurred during the late Hellenistic and early Roman eras. Repeated visits have revealed, however, that fragments belonging to the Pinched Handed Agora M239 Amphora are most commonly encountered at the site. This fractional form appears to have replaced the larger Early Roman pinched handled version of the form (Zemer 41 or Agora G199) during the Late Roman era. The form of the Pamphylian amphora produced at the site likewise is dated by V. Grace (1973: 196, fig. 13) to the 1<sup>st</sup> - 3<sup>rd</sup> centuries AD. The discovery of the follis of the Roman Emperor Maximianus Daia (305-308 AD) at the site in 2003 likewise points to this period as the most productive one at the Syedra Kiln Site.

#### THE BIÇKICI KILN SITE



Figure 14: IKONOS Satellite View of the Biçkici Kiln Site; the Terrain in 1996



During the course of 1996 survey season the survey team identified a second kiln site, the so-<sup>1</sup> named "Biçkici Kiln Site" that stands near the mouth of the Biçkici River (fig. 14). Much like the Syedra Kiln Site, the site is situated on a terraced field directly abutting the sea at mouth of the river (fig. 15). It is located some two kilometers north of the modern town of Gazipasha and approximately 10 km south of the Syedra Kiln Site. Access to the site has changed considerably due to the expansion of the Gazipasha Sanayi or industrial park. To find it, one must turn off the national highway on the south side of the bridge over the Biçkici River and meander through a neighborhood along a dirt road for about a kilometer before arriving at a terraced residential complex belonging to the Turkish National Forestry Service. The forestry service complex is settled near the base of a small coastal promontory known as Karadağı, below which near the mouth of the river stands a large freestanding Roman-era tower (fig. 16). In an open field beside this tower (approximately 73 m. N/S by 72 m. E/W), the survey team encountered a dense cluster of amphora and commonware sherds (fig. 17). Directly above the site looms a large promontory capped by the ruins of a Early Byzantine monastery (the Biçkici Kale). The promontory conceals a karstic environment and is hollowed out by large caverns containing fresh water springs (fig. 18). The spring water of the most accessible cavern is still used by Forestry Ministry residents, in fact. Clay deposits are also present in the caves, thus furnishing a useful triad of fresh water, clay soil, and close proximity to the shore.



Figures 16-17: View of Roman Era Tower and Open Terrain at the Bickici Kiln Site, with Turkish Forestry Service Community in the Background



Figure 18: Cave Containing Clay and Potable Water at the Promontory behind the Bickici Kiln Site

Material evidence supporting the site's identification as a kiln include two or three partly vitrified kiln lining fragments and a tile as well as three or four smaller vitrified pieces including a mushroom amphora toe fused to a kiln tab (fig. 19), another toe (end broken off), a strap handle, and a ring foot. The tile exhibits a moderately coarse fabric with equal amounts of subrounded white, red, and black inclusions. None of the amphoras have any visible inclusions, and the plainware fabric has abundant small angular white inclusions only. Lying beside the Biçkici River, the site is exposed to repeat flooding, much like the Syedra Kiln Site. This has revealed fresh remains nearly every time team members have visited. In 2003 the team conducted a magnetometric survey in the terraced field in front of the Roman tower that revealed the presence of a large anomaly just below the surface. Autret also identified the remains of a structure along the edge of the field terrace behind the beach. Our most remarkable find occurred during a visit in 2007, when disturbances revealed the existence of a long terrace wall extending from the southwest corner of the Roman-era tower for about 10 meters in the direction of the sea (figure 20). At the



base of the wall where it joins with the corner of the tower two press stones were revealed: one<sup>1</sup> a crushing wheel (*orbs*) for an oil press, the other a press bed (*ara*; fig. 21). Additionally, Autret has called attention to the presence of two upright, slit stone settings in the wall of the tower. The settings face the remains of the press installation at approximately the same level as the terrace wall (fig. 22). These appear to be socket holes to receive the wooden arms (*praela*) of two adjoining lever press installations. This site, thus, presents a multi-faceted array of elements essential to an oil and wine production complex. Abundant fresh water was provided by the neighboring river and the spring beneath the mountain, the cave furnished clay deposits, and the river would have enabled the transportation of fuel in the form of wood brought down from the Tauros Mts. (Biçkici in Turkish means the Wood-Cutter's River). The press installations allowed for the production of wine and olive oil, the tower possibly served as a storage facility for transport amphoras laden with wine and oil, and the immediate frontage on the sea facilitated maritime transport. Despite the lack of visible remains of a kiln structure, the productive function of this site seems clear. Unfortunately, today the site has become obscured by the implantation of an extensive banana tree farm directly in front of the Roman-era tower as well as by the continuing construction of houses on the terraces directly above the site.



Figure 19: Overfired Toe Fragment of a Pinched Handled Agora M239 Amphora Fused to a Kiln Tab, Biçkici Kiln Site



Figure 20: View of Terrace Beside Roman-Era Tower Where Press Elements Were Exposed, Biçkici Kiln Site



Figure 20: Up-turned Press Elements (Olive Crushing Basin and Press Bed) at the Biçkici Kiln Site





Figure 21: View of Vertical Settings on Side Wall of Tower, Level with Adjoining Terrace, possibly to House Twin Lever Press Arms (*Praela*), Biçkici Kiln Site

Alongside commonware basins the kiln site appears to have produced four types of amphoras: the Dressel 2-4 Koan Type Amphora (fig. 23), the large Pinched Handled Zemer 41 Amphora, the fractional Agora M239 of the same type, and the Agora M273 Type Amphora with the grooved rim and ridged strap handles. The fabric of all four types is the same: very fine light red (5 YR 6/6 or 6/8) usually with a buff surface. With a hand lens fresh breaks are micaceous and still very fine: a moderate or sparse number of rounded red and black grits just on the edge of visibility. Handles and toes have more variable fabrics, sometimes coarser, as well as very pale brown examples with no visible inclusions. Like the Syedra Kiln Site, the context pottery obtained from the Biçkici Kiln Site points to utilization from the Hellenistic Era through the Late Roman.



Figure 23: Double-Rolled Handle and Beveled Rim to a Koan Type Amphora Found at the Biçkici Kiln Site

#### ANTIOCH Kiln Site

In 1997 the survey team identified a third production center at Antiochia ad Cragum, the modern village of Güney, situated in a small field alongside the paved road leading to the site from the highway. The field stands directly beside the modern schoolhouse of Güney village, which now serves as the field headquarters for the U. of Nebraska Excavations at Antiochia ad Cragum. Under the direction of Michael Hoff, the site has been under excavation by a combination of American and Turkish teams since 2007. Here we encountered similar clumps of baked earth and a number of fragments of West Cilicia basin and pinched handled Zemer 41 amphoras of a distinctly gritty, micaceous, coarse-breaking, yellowish red fabric (5 YR 5/8). This and a similar fine grained, medium soft, darker red micaceous fabric (2.5 YR 4/6-10 YR 4/6) occur in such high concentrations among the collections gathered at Antioch that they are identified in the Study Collection as "Antioch" fabrics (SC 185g). The site likely produced both the large Pinched Handled Zemer 41 amphora and the fractional Agora M239. In recent years the excavation has exposed a number of kilns situated in the remains of repurposed Roman-era bath complexes. One of these, a very large kiln with an intact clay kiln floor, is currently being excavated by our colleague, Hatice Asena Kızıarslanoğlu of Kastamonu U. Given the numerous developments that have occurred and are on-going at Antiochia, our survey of the site has been rendered obsolete. We, therefore, defer to the results of the excavation team and await their forthcoming publications. Our survey pottery processed during the 1996-1997 seasons, as well as that arising



from the maritime survey conducted by Cheryl Ward during the 2004 season at Antiochia, are published in our dataset RCSP Ceramics Collections at Antiochia ad Cragum, 1997 and 2004 (v1.0).

### THE DELICE KILN SITE

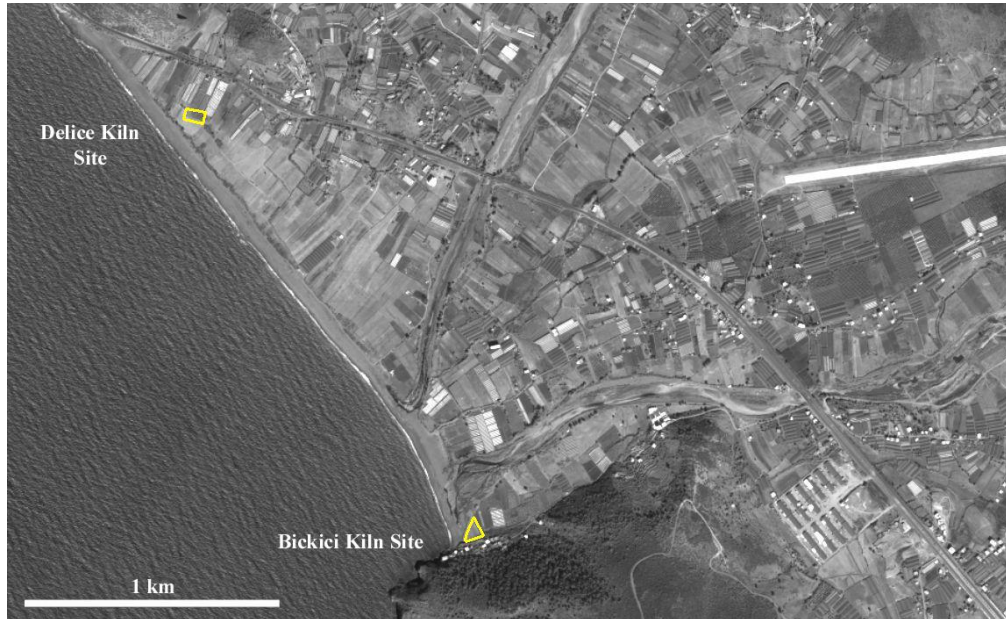


Figure 24: IKONOS Satellite View of the Locations of the Biçkici and Delice River Mouths and Kiln Sites



Figure 25: Close Up View of the Delice Kiln Site in the IKONOS Satellite Image



Figure 26: View of the Terrain at the Delice Kiln Site in 2008 with Ruined Structure in the Background



Figure 27: Retaining Wall on the East Side of the Ruined Structure at the Delice Kiln Site in 2008





Figure 28: In-situ Door Post at the Ruined Structure of the Delice Kiln Site in 1996



Figure 29: Fragment of Overfired Clay or Kiln Debris at the Delice Kiln Site

The fourth possible kiln site in the survey area, known as the Delice Kiln Site after the nearby river, is located some 2 km north of the Biçkici Kiln Site on the same strand of beach. Like the others, this site is set back behind a line of dunes that frame the beach on the edge of the agricultural terrain directly behind (figs. 24-25). The mouth of the Delice River is actually several hundred meters south of the site. During the 1996 survey season, the team mapped a large walled enclosure with a ruined structure exhibiting in situ doorposts situated at the southern end of the complex (figs. 26-28). When the site was investigated in 1997, local farmers had exposed a clay pit directly behind the remains. Large lumps of fired clay (fig. 29) and overfired fragments of Pinched Handle Agora M239 and Yassi Ada (LRA 1) amphoras (fig. 30) were identified in and around the courtyard. Like the other kiln sites, the Delice Site has been repeatedly revisited through the years. The context pottery is predominantly Late Roman, and includes fragments of CRS Forms 1, 2, 9, and 11, as well as amphora body sherds exhibiting combed bands. Early Roman remains include the handles of a Cypriot Sigillata lagynos, ESA fineware, and an Amalgro 51C amphora. Our investigators remain sceptical that the vestiges were sufficient to confirm the presence of a kiln site. In 1997, Kathleen Slane concluded that the sherds collected at this site lacked the uniformity of those encountered at the Syedra and the Biçkici sites either with respect to form or fabric. Given its situation near a river directly behind the beach, one has to allow for the possibility that the site fulfilled some other function, such as a late Roman maritime depot, the fire destruction of which could similarly have generated the baked earth and blackened ceramic materials we encountered. During his reexamination of the sherds collected through the years and stored at the Alanya Archaeological Museum, he concluded that the Delice site may, in fact, have served as a kiln site during the Late Roman and Middle Byzantine Eras.





Figures 30-31: Rim and Handle Fragment of a LRA 1 Yassi Ada Variant Amphora (deliceks-2011-9603-164) from the Delice Kiln Site; Profile Drawing of a LRA 1 Transitional Type Amphora at the Anamur Archaeological Museum (H.A. Kızıllarslanoğlu)

The amphoras that concern us are the Agora M239 and a variant of the LRA 1 Yassi Ada amphora observed at the site. On close inspection the fragments of both exhibit the same consistent, fine, reddish brown fabric (2.5 YR 6/4 to 6/6, light red) with numerous medium red speck and small white lime speck inclusions. The fabric is very hard and often appears overfired on the surface (2.5 YR 5/1). Since the Pinched Handled Agora M239 was likely produced at all four kiln sites, its presence here conforms to a regional pattern. However, this is the only site in Western Rough Cilicia that appears to have produced the Late Roman / Early Byzantine LRA 1 amphora (figure 31). Closer inspection reveals that the rim of the LRA 1 fragments at the site match a later variant of the form. The form exhibits a rolled rim sharply incised underneath with the handle attached directly below the rim. This corresponds with an LRA Variant form, referred to in the Anamur Amphora Collection as the LRA 1 transitional type amphora (Autret et al. 2021). This form exhibits a short outward flaring neck, a high rounded shoulder, a broad upper body, cinched toward the base, and a rounded base. Handles are oval, flat, and strap like; they project out from just below the rim and bow downward to attach at mid shoulder. Traces of wheel ridging are visible from the handle attachments to the base. The examples recovered at the Delice Kiln Site do bear a noticeable slice down the handle, which corresponds more with the LRA 1 Yassi Ada amphora, and distinguishes it somewhat from the Early Byzantine variant. Otherwise, the rim, neck, and overfired surface texture resemble the later form.

Intact examples of this form have been identified at both the Anamur (amphoras 2.1.92, 2.4.93 and 2.8.92) and the Alanya Archaeological Museums. Asena Kızırlarşlanođlu has raised the possibility that the same form was produced at nearby Antiochia ad Cragum (personal communication). Its presence along the coast of Western Rough Cilicia points to regional use and production. After identifying the form at Alanya, Sibella (2002, fig. 24a) suggested that it represents a locally produced variant of the Middle Byzantine Günsenin type 1 amphora (8-10<sup>th</sup> century AD). Given the presence of this form in the immediate region and the recovered overfired fragments at the Delice Site, it seems prudent to keep the question of a kiln site at this location open, if only to preserve what little evidence is available for the production of this form. It is worth noting that the amphora remains at the Delice Site indicate a four-century-long gap between the production of the Agora M239 (1-4<sup>th</sup> AD) and the LRA 1 transitional type (8<sup>th</sup>-10<sup>th</sup> AD). If this is accurate the site was probably abandoned at the end of the Roman Era and reutilized during the Byzantine recolonization of Rough Cilicia.

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