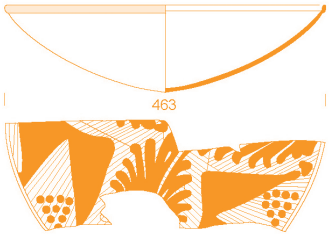
Test of the Nabataean Painted Fine Ware typology in Aila's Area K



Abstract: Although Nabataean Painted Fine Ware (NPFW) has been examined in light of Stephan Schmid's chronological typology since the late 1990s, few stratified contexts with NPFW from outside Petra have been published, and none derived from contexts occupied continuously from the Nabataean through Byzantine periods. Questions remain about the dating of later Dekorphases (3–4) due to a lack of contexts. This paucity is remedied, however, by Area K at Roman Aqaba/Aila, Jordan. Area K was a domestic complex, just inside the later Byzantine city wall, excavated from 1994 through 2002. Using associated numismatic evidence and imported fine wares (primarily Eastern Sigillata A and African Red Slip), this paper argues that NPFW Dekorphase 3b appeared at Aila in the second half of the 1st century CE, and Dekorphase 3c appeared shortly afterwards, around the time of the Roman annexation in the beginning of the 2nd century.

Keywords: Nabataean Painted Fine Ware, Nabataea, Petra, Aila, Jordan

One of the most distinctive features of Nabataean culture is its extraordinary ceramic tradition, especially the unique and justifiably famous Nabataean Painted Fine Ware (hereafter NPFW). However, for decades after its initial discovery and identifica-

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Polish Archaeology in the Mediterranean 30/2
Wenner 2021: 595–610
https://doi.org/10.31338/uw.2083-537X.pam30.2.04

Acknowledgments
This article was a product of some of my initial work with Nabataean ceramics. My sincerest thanks to S. Thomas Parker, who not only prompted me to take on this topic but who provided all the access to the materials needed from his Roman ʻAqaba Project excavations. Thanks are also due to the History Department at North Carolina State University, who funded my conference travel in February 2014, as well as the American Center of Research in Amman, whose Bikai Fellowship in 2013 granted me the time and space needed to dig into the stratigraphy.

tion, these ceramics defied all but the most basic attempts to characterize its chronological development. Scholars such as Peter Parr and Karl Schmitt-Korte contributed useful observations but none presented a comprehensive typological and chronological scheme (Parr 1970; Schmitt-Korte 1971). This was due largely to the absence of well-stratified ceramic sequences, particularly from the Nabataean heartland around Petra.

In 1996, Stephan Schmid published a new chronological typology of the Nabataean Painted Fine Ware (hereafter NPFW), based on the Swiss excavation at the ez-Zantur domestic complex in Petra (Bignasca et al. 1996). Schmid's typology is based on a series of "Dekorphases", each only a few decades in duration. These Dekorphases permit much closer dating of Nabataean sites across the entire kingdom. Since then, it has basically been accepted as valid.

However, the NPFW chronological typology has not yet been tested outside of the Nabataean capital city. Dekorphases 3b and 3c (see below) are particularly problematic because of a gap in occupation at ez-Zantur from the early 2nd to the end of the 3rd centuries CE (Schmid 1997: 415). This gap is unfortunate as NPFW potentially offers the best datable evidence outside of coins. The material is ubiquitous at Petra-area sites, and each Dekorphase seems to have ceased production close to the subsequent type's appearance. Additionally, while the ceramics could be understood as a low-end luxury good, its presence at numerous hinterland sites suggests that it was affordable to a large proportion of the Nabataean population. Therefore, an understanding of the chronology is beneficial for the interpretation of survey material from the 2nd century BCE through the 2nd century CE.

This paper presents an interim statement on an attempt to synthesize some evidence from a well-stratified site outside Petra but within the Nabataean kingdom, i.e., the Red Sea port of Aila (modern Aqaba), and specifically Area K. S. Thomas Parker's Roman 'Aqaba Project excavated in the Nabataean city of Aila on the Red Sea coast between 1994 and 2003. Through excavation and a regional survey, his team attempted to reconstruct the city's economy from its foundation in the 1st century BCE until the early Islamic period. The first volume of the final report, including ceramics from the regional survey, has been published (Parker and Smith 2014). The second volume, from which this evidence is drawn, will include Nabataean and Roman pottery from the excavation.

AILA, ROMAN AQABA

Aila was founded in the late 1st century BCE, apparently as a Nabataean response to an emerging threat. After the Roman conquest of Egypt, the Romans attempted to divert lucrative commerce from the Nabataeans through a successive foundation or revitalization of Egyptian ports on the Red Sea. Nabataean Aila served as a transshipment point between ships and caravans connecting the Red Sea with the Mediterranean (Parker 2009: 80). Although there is some evidence of dis-

continuity in occupation around the time of the Roman annexation of Nabataea in 106 CE (Retzleff 2003: 49), Aila continued to flourish under Roman rule and served as the southern terminus of the *Via Nova Traiana*, the great trunk road extending from Aila northward towards Syria.

Unlike all other areas from the Roman 'Aqaba Project, Area K seemingly did not experience a temporary abandonment at the turn of the 2nd century (Parker 2002: 421), therefore making these contexts the best evidence to examine the appearance of Dekorphases 3b and 3c. Through this area, it becomes apparent that Dekorphase 3b emerged in the second half of the 1st century CE, in agreement with Schmid's chronology, while Dekorphase 3c appeared during the transition from Nabataean to Roman rule. After a brief review of Schmid's NPFW chronological typology, the stratification of the three trenches that reached Nabataean occupation levels is discussed and analyzed, before finally explaining how this analysis affects Schmid's NPFW typology.

THE NPFW CHRONOLOGICAL TYPOLOGY

The relevance of Nabataean pottery from Petra to the field of Nabataean studies is now especially vital as it can assist in the dating of survey sites. Prior to Nelson Glueck's contributions in 1932, scholars understood the Nabataeans as "eschewing industry and architecture . . . and employing what artistic talents they had only on the carving of rupestrian funerary monuments at a few religious centers" (Kammerer 1929; Parr 1970: 349). This view, which Parr attributes in large part to Glueck, who credited the Nabataeans as building as sophisticated a community as any in the Levant at the time, is largely held to be inaccurate. Glueck came to his conclusion based chiefly on his engagement with Nabataean painted pottery, shifting the field from the study of monumental architecture to the chronology and typology of pottery. Glueck was also the first to propose a "Madaba–Dead Sea Line," a northern boundary for the geographic distribution of NPFW. However, Benjamin Dolinka notes that excavations in the Hauran slightly modify this boundary. Also, Glueck's southern limit has since been revised to Meda'in Salih in Southern Arabia (Winnett et al. 1970: 50, 53, 178–179; Dolinka 2003: 56). Philip C. Hammond (1959: 371–382) later identified two "form classes" in his early 1960's excavations of the main theater at Petra and even recognized most of the pattern families used. Unfortunately, the intense focus on minute details made the forms almost unusable (Schmitt-Korte 1971). Parr's chronological phasing backed away from such detailed analysis and instead focused on the quality of the fabric and application of the paint. However, Parr's chronology did not prove useful for dating.

It was not until Stephan Schmid's work at ez-Zantur that a useable NPFW chronology emerged. Schmid dramatically changed the study of NPFW and pushed back the initial production to about 150 BCE, an entire century prior to the date proposed by research from the Negev and 50 years before Parr's hypo-

thetical beginning. Petrographic analyses have now confirmed that NPFW originated in Petra ('Amr 1987). Schmid divided the NPFW into four Dekorphases with subphases under Dekorphases 2 and 3. Dekorphase 1 extends from about 150 to 50 BCE and is distinguished by straight or slightly curved lines that originate from the sides and meet at the vessel's bottom, usually in pale red paint. Dekorphase 2 is also characterized by red paint on red fine ware. The fabric generally is fine and well levigated. Subphase 2a extends from about 50 to 30/20 BCE and is characterized by a floral motif. Subphase 2b is differentiated by a circular trim around the top and abstract fine-line decoration, almost like pine tree needles, dating from 30/20 BCE until the turn of the 1st century CE. Subphase 2c most notably appears to have squid-like details (the leaves have become a bit more abstract) and dates through the first 20 years of the 1st century CE. The paint color changed as well, from red to violet-brown (Schmid 1995; 2000; 2004).

Dekorphase 3, which is generally finer than previous forms, begins around 20 CE and continues at least through the beginning of the 2nd century CE. Subphase 3a (about 20 to 70/80 CE) shares some of the same motifs of the previous subphase but also introduces new, realistic floral motifs. The most distinctive and diagnostic patterns include differing combinations of "trellised motifs of ivy- and lancet-shaped leaves" often set in on a bed of distinctive cross-hatching (Schmid 1997: 413; Schmid 2007: 315–316). Although part of the same phase, subphase 3b represents the introduction of a markedly different style. The subphase (about 70/80–100+ CE) utilizes geometric shapes and the pomegranate fruit set on top of a bed of lines, covering the body of the fine ware, ranging in color from brown to black paint. The shapes themselves are considerably larger than they had been in any previous subphase and there is significantly more space between them (Schmid 2003: 80).[1] Subphase 3c (about 100+ CE) is similar to 3b; the shapes and motifs are along the same theme, but the design becomes cruder and lacks the fine, background lines. The transition to Dekorphase 4 could not be clearly defined because occupation ceased at ez-Zantur in the early 2nd century, but it likely be-

1 That the shift from small, naturalistic decoration to bold, large shapes most likely occurred under the reign of Rabbel II does not seem accidental. A review of the archaeological evidence of the last few decades of the 1st century CE suggests a rejection of Hellenistic and Roman artistic traditions in favor of something that was more indigenously Nabataean or "Arab". For example, Wenning noted that, contra the anthropomorphic representation of gods during the Augustan period, at the end of the 1st century CE Nabataean gods were exclusively depicted as betyls. While common in other periods, "in der Homogenität des Vorkommens für alle Götterdarstellungen ist der Befund bemerkenswert [the finding is remarkable in the homogeneity of occurrence for all depictions of gods]" (Wenning 1993: 88). Inscriptions described Rabbel II as a man "who resuscitated/renewed and saved his people". While the more traditional interpretation of this title is that he prevented the annexation of Nabataea or kept the Nabataeans from a political conflict (e.g., Bowersock 1983: 72–75; al-Salameen and Falahat 2014: 300–301; Barkay 2019: 67), one could also interpret the shifts in the material culture of this period as reflecting Rabbel's role as a renewer (Schmid 2003: 80).

gan sometime between 150 and 250 CE and might have continued to the beginning of the 4th century. It is similar in appearance to subphase 3c but less finely levigated (Schmid 1995; 2000; 2004).

Schmid also analyzed destruction layers specific to the subphases of Dekorphase 3. A destruction layer marked the transition from 3a to 3b in the lower Nabataean Building as the context contained three Rabbel II coins dating to 72, 76 and 85 CE (Schmid 1997: 414–415). The next destruction layer dates to the turn of the 2nd century CE. While this destruction could have been caused by a cataclysmic event, like the 114 CE earthquake (Schmid 1997: 416), Schmid argues that it was a result of the Roman annexation of the Nabataean kingdom in 106 CE (Schmid 1997: 418–420); the ez-Zantur destruction layer corresponds not only with the NPFW transition from Dekorphases 3b to 3c, but also contained Eastern Sigillata A (hereafter ESA) sherds dating from the end of the 1st to the first half of the 2nd century CE (Schmid 1997: 415).

Fig. 1. Area K in Aqaba/Aila in 2000: early Byzantine structures (After Parker 2002: 422)

Although disturbed around 300 CE by activities during the late Roman phase, the majority of the pottery found was NPFW 3c, with a few 3b sherds. Most significant to Schmid's typology are the quantities of ESA recovered, dated fairly securely by John W. Hayes. The ESA forms associated with the different types of NPFW suggest that this destruction layer occurred at or slightly after the turn of the 1st century CE (Schmid 1997: 415). If Schmid's pottery chronology holds true, it allows other destruction layers found in conjunction with the Roman annexation to be identified, which is currently still a vital theme in Nabataean studies.

AREA K OVERVIEW

Area K was excavated between 1994 and 2002 as part of the Roman 'Aqaba Project because Parker expected it would contain evidence of Byzantine occupation in the city of Aila (Parker 1996). The area lies southeast of Area J, which revealed both a segment of the early Byzantine city wall and a structure that Parker has argued was a Christian Basilica founded about 300 (Parker 1996). While Area K yielded less remarkable finds, it proved to be rich in both Byzantine and early Islamic remains (Parker 1998: 385–387). The team opened 14 trenches in total, most of which were not excavated deeper than Islamic levels. Only three trenches reached Nabataean strata in the final season: trenches K.10, K.11, and K.14 [*Fig. 1*]. But Area K was nevertheless incredibly important for an analysis of the NPFW chronology as the three trenches suggested continuous occupation for eight centuries. Specifically, the team learned that the Byzantine and Umayyad street originated in the Nabataean period (Parker 1998: 391). And as the only Roman 'Aqaba Project area that did not have an abandonment layer around the emergence of Dekorphase 3c, it can test the appearances of both Dekorphases, 3b and 3c.

TRENCH K.10

A deep probe in trench K.10 revealed the oldest evidence of construction: a beaten earth floor over loose sand with a thin mud-brick wall. Within this context were a *tabun* (oven), significant amounts of burnt shell, and evidence of Nabataean channels (Parker et al. forthcoming). Also within this context were sherds of ESA F54 (75–130/150 CE, Hayes 1985), a Class 10 amphora (late 1st BCE to mid 2nd century CE, Peacock and Williams 1986: 105–106), and a Johnson Form VIII unguentarium (2nd century CE, but possibly intrusive, Johnson 1990: 238). Additionally, a small ESA fragment appears to be either F43 or F58. The former dates to the Augustan era and fits well within the phase proposed, but given the form's rarity, it seems unlikely that it would be present in Area K, especially considering that no other F43 sherds were found at Aila. Therefore, the fragment of ESA is probably an intrusive F58 (dated to the early 2nd century). All NPFW sherds identified in this context, both Dekorphases, 3a and 3b, fit well with the excavator's proposed late 1st century CE date [*Table 1*].

Table 1. Chronological indicators by phase for trenches K.10, K.11 and K.14

Trench	Small finds	ESA/ESC	Amphora	Other ARS and other fine ware	NPFW
	I	Early Roman I (late 1st century CE)			
K.10		2 sherds F54 (75–130/150 CE); F58 (possible F43) (100–150 CE)	2 Egyptian (Class 52 and/or 53); 2 Proto-Gaza; 4 Gaza; Class 10 (1st–2nd c. CE)	Unguentarium FVIII (2nd c. CE)	3a: 19 sherds (20–70/80 CE); 3b: 31 sherds (70/80–100 CE)
K.11		ESA, not closely datable	3 Gaza		2c: 1 sherd (1–20 CE); 3b: 1 sherd (70/80–100 CE)
K.14	3 Nabataean coins, 1st c. BCE	F50B (60/70–100 CE)			
	II	Early Roman to Late Roman Transition (late 1st century CE)			
K.10		F50B (60/70–100 CE)	1 Gaza; Class 27 (50 CE–end 3rd c. CE)		3a: 2 sherds (20–70/80 CE); 3b: 2 sherds (70/80–100 CE)
K.11		ESA jug, not closely datable			3b: 5 sherds (70/80–100 CE)
K.14		F29 \ (30 BCE–20/25 CE); F50B \ (60/70–100 CE); F111 \ (mid–late 1st c. CE)			
	III	Late Roman I (2nd century CE)			
K.10		F50B (60/70–100 CE)	1 Egyptian (Class 52 or 53); 1 Proto-Gaza; 2 unidentified		3a: 2 sherds (20–70/80 CE); 3b: 7 sherds (70/80–100 CE); 3c: 3 sherds (100–150 CE)
K.11		3 not closely datable ESA		F50A (230/240–325CE); Axum (generally 4th c. CE at Aila)	3b: 3 sherds (70/80–100 CE); 3c: 1 sherd (100–150 CE)
K.14	4 lamps; coin, mid 4th c. CE; bead	12 not closely datable ESA; F58 (100–150 CE)	Egyptian (Class 52 and/or 53); Gaza	Not closely datable Cypriot Sigillata	3b: 8 sherds (70/80–100 CE); 3c: 1 sherd (100–150 CE)

In the next phase—considered as an early Roman to late Roman transition—the partition wall from Phase I was covered with a loose pile of stone cobbles, almost half a meter in height. Perhaps dumped from another area, the deposit suggests a brief period of abandonment not identified in either trenches K.11 or K.14. Despite a clear lack of use, the associated ceramics, including one sherd of ESA F50B (about 60/70–100 CE, Hayes 1985) and a Class 27 amphora (about 50–end of 3rd century CE, Peacock and Williams 1986: 142–143), suggest abandonment dates at the turn of the 2nd century. Two sherds of Dekorphases 3a and 3b also agree with the proposed dating. Dekorphase 3c was not present and not expected in this context due to the likely abandonment of K.10 during Phase II.

Table 1. (continued)

	IV	Late Roman IIa (early 3rd century CE)			
K.10		Unidentifiable ESA	1 Proto-Gaza		2c: 1 sherd (1–20 CE); 3a: 1 sherd (20–70/80 CE); 3b: 3 sherds (70/80–100 CE); 3c: 3 sherds (100–150 CE)
K.11		2 ESA, not closely datable	3 Egyptian (Class 52 or 53); 2 Proto-Gaza; Class 47 (late 2nd–4th c. CE)	Axum (generally 4th c. CE at Aila); ERS A (appears at Aila in 3rd c. CE)	3b: 13 sherds (70/80–100 CE); 3c: 5 sherds (100–150 CE)
K.14	Nabataean coin, 1st c. BCE	5 ESA, not closely datable	UD–R	2 UD ARS; 6 ERS A	3b: 2 sherds (70/80–100 CE)
	V	Late Roman IIb (late 3rd and early 4th century CE)			
K.10		F54 (75–130/150 CE)	Class 10 (1st–2nd c. CE); 1 Gaza		3a: 2 sherds (20–70/80 CE); 3b: 8 sherds (70/80–100 CE); 3c: 5 sherds (100–150 CE)
K.11		1 ESA, not closely datable	Aila; 2 Egyptian (Class 52 and/or 53); Class 10 (1st c. BCE–mid 2nd c. CE)		3a: 1 sherd (20–70/80 CE); 3b: 1 sherd (70/80–100 CE)
K.14	Coin, late 3rd c. CE	F56 (mid–late 2nd c. CE)		F50A (240–300 CE)	

However, three sherds of Dekor-Phase 3c do appear in the next phase—Phase III or the first late Roman phase—along with seven sherds of Dekorphase 3b and two residual sherds of Dekorphase 3a. This phase started above a lens of ash and charcoal mixed with sand, probably the result of dumping and cooking, over which occupants built a whitewashed mud-brick wall. Ceramic remains were mostly unhelpful and the context was dated from the rich finds from K.11. K.10 did contain another sherd of ESA F50B, and while this sherd does not directly join with the one from K.10's Phase II, it seems likely that they come from the same vessel. Two amphora sherds were also recognized in this context, one Egyptian (Peacock and Williams Class 52 or 53) and one Proto-Gaza, commonly found at Aila from the 1st through 4th centuries (Parker et al. forthcoming). Two other unidentified amphora sherds were also present.

The rest of the ceramic finds from K.10's Phase III were either cooking or storage vessels, with a few unidentified ESA sherds and an unguentarium. While the bulk of this material is in Aila ware, almost 30% of the utilitarian ware vessels were imported from Petra, confirming that traffic both ways between Aila and Petra was significant. Therefore, it seems likely that Dekorphase 3c reached Aila soon after the new phase appeared in Petra.

The Late Roman II was further divided into subphases a and b. The first—Late Roman IIa or Phase IV—dated no earlier than the late 3rd century. While this does seem exceptionally late given the dearth of later datable material in the previous phase, remains from other trenches support this proposed dating. Mud-brick structures appeared in this phase and a small pit, filled with bone, charcoal and plaster, offered further evidence of domestic use (Parker et al. forthcoming). Among the pottery was a wide variety of the NPFW, the latest being three sherds of Dekorphase 3c. The total number of Dekorphase 3b sherds (n=3) still equals that of the Dekorphase 3c sherds, and they appear to be of approximately the same size. The decreasing size of sherds usually suggests secondary or tertiary contexts as opposed to primary deposition, but in this case it is not helpful in illuminating a possible transition from Dekorphases 3b to 3c.

Additionally, there are no sherds of Dekorphase 4 in Phase IV, which Schmid suggests began after about 150 CE and should appear in this phase, if present. However, as only 12 Dekorphase 4 sherds were identified site-wide at Aila, no excavation area at Aila can clarify the last Dekorphase's emergence. The previously mentioned study of Area M supported Schmid's proposed emergence of Dekorphase 4 in the mid-to-late 3rd century and even suggested that the NPFW was no longer routinely exported to Aila in the 3rd century for unknown reasons.

The second subphase of Late Roman II—Late Roman IIb or Phase V—primarily witnessed the building of additions during the late 3rd and early 4th century. Within these new structures, the generally wind-blown or dumped soil deposit contained relatively few ceramics. The most closely datable pottery was residual, including an ESA F54 (about 75–130/150 CE, Hayes 1985) and a Class 10 amphora; the NPFW included

eight sherds of Dekorphase 3b and five sherds of Dekorphase 3c. Both Dekorphases should be residual, despite the slight increase in quantity; the NPFW and the earlier ESA sherds were most likely deposited as a result of new building activity, and do not suggest primary use in this period.

TRENCH K.11

Excavation in trench K.11 reached early Roman/Nabataean levels contemporary with those of Phase I in trench K.10. However, the trench was not excavated down to bedrock: a probe revealed a cobble stone pavement which, when removed, suggested even earlier Nabataean occupation. Because of time constraints during the final season, the team neither excavated past 1st-century-CE levels nor completely excavated the entire trench. Despite the smaller area, the phase did yield one Dekorphase 3b sherd from Phase I, suggesting a *terminus post quem* in the late 1st century CE. Other ceramic finds included an unidentifiable ESA sherd and three Gaza amphorae sherds [see *Table 1*].

Phase II or the ER/LR transition period in K.11 suggests not only continuous but even prosperous occupation. A hearth yielded deposits of gray ash and charred bones, likely from a small wood pile. Wood is obviously rare in the area, although parallels from Berenike on the Egyptian Red Sea coast suggest reuse of imported wood, possibly from crates or wrecked ships (Parker et al. forthcoming). No matter where it originated, the presence of wood suggests something more than mere survival. Associated ceramic evidence is lacking and five sherds of Dekorphase 3b provide a *terminus post quem* of the late 1st century CE.

This apparent dearth of ceramic evidence does not continue into Late Roman I, that is, Phase III. Excavation revealed a dump containing not only pottery, but also bone, ash, and glass. Material ranged in date from the 2nd to early 4th centuries and finds included three unidentified ESA sherds that are most likely residual, three sherds of Dekorphase 3b, one sherd of Dekorphase 3c, three lamps, an African Red Slip (hereafter ARS) form 50A (about 230/240–325 CE, Hayes 1972: 69–74), and Axumite pottery (generally 4th century at Aila) (Parker et al. forthcoming). However, it should be noted that the ARS, Axumite, and Dekorphase 3c were found in the upper levels of the dump, which suggests that material from the earlier levels was not necessarily contemporaneous with these finds.

As suggested by the dump in Late Roman I, the Late Roman IIa/Phase IV can be dated to the late 3rd century when the dump was leveled and mud-brick walls were constructed atop it. In one of the new spaces created by the mud-brick walls, a pile of pure clay lumps was deposited against a wall and over small footing stones—perhaps resulting from periodic cleaning of reservoirs and cisterns. The main occupational deposit, atop the clay deposit, was rich in material culture and yielded two unidentified coins, bronze and iron pieces, sherds used as temper in clay bricks, and fragments from *tabun* walls. Ceramic finds included a sherd of Parthian green-glaze ware, several sherds of Egyptian Red Slip A (hereafter ERS A), Egyptian (Class 52

and/or 53) and Gazan amphorae, a Class 47 amphora (late 2nd–4th century CE, Peacock and Williams 1986: 193–195), 13 Dekorphase 3b sherds, and five Dekorphase 3c sherds. Both the ERS A and the Class 47 amphora support the phase's 3rd century date.

Late Roman IIb or Phase V witnessed further architectural modifications during the late 3rd and early 4th centuries. A new, stone wall was erected with a thick coating of plaster, explaining the plaster found in this phase in the adjacent trench K.10. The plaster had painted decoration comprising red, black, and yellow geometric shapes, including squares, rectangles, chevrons, and grids with dots, not unlike the NPFW itself. As the decorated pattern common to NPFW is attested well into the 4th century (although not always on fineware), it is possible that the plaster wall is a sign that local inhabitants continued at least partly to identify as Nabataean. Ceramic finds included residual ESA and Class 10 amphora sherds, one sherd each of Dekorphases 3a and 3b, and one likely intrusive Aila amphora.

TRENCH K.14

In trench K.14, the first two phases yielded no identified NPFW. While K.14 did reach seemingly undisturbed sand, no architecture was associated with the Early Roman or Phase I. However, the team did identify an ESA F50B and three Nabataean coins, suggesting that occupation levels similar to those in K.10 and K.11 were reached [see *Table 1*]. The Early Roman to Late Roman Transition Period—or Phase II—contained the earliest associated architecture constructed of unworked granite. Datable material included ESA F29 (about 30 BCE–20/25 CE), F50B, and F111 (about mid to late 1st century CE, Hayes 1985).

Dekorphases 3b and 3c appear for the first time in the first late Roman phase, that is, Phase III. A new clay surface and beaten earth floor overlay the cobble paving of the previous phase. Atop the clay surface was a thin layer of soil, rich in artifactual material, including four lamps, an intrusive mid-4th century Byzantine coin, a bead, tiles, 12 unidentifiable ESA sherds along with recognizable ESA F58 (about 100–150 CE, Hayes 1985), an undatable Cypriot Sigillata sherd, Egyptian (Class 52 and/or 53) and Gazan amphorae, eight sherds of Dekorphase 3b, and one sherd of Dekorphase 3c. The absence of ARS suggests that the phase dates to the early 2nd century CE and ends before ARS was widely imported, sometime in the mid to late 3rd.

In Late Roman IIa/Phase IV, the older architectural features were refortified and a stone bench added, possibly to facilitate some sort of work or to serve as storage. Pipes were also added to the work area, which contained glass, shell, bone, bronze, iron, ash, marble slabs, a residual Nabataean coin, and plaster flecks, in conjunction with flat-lying sherds that suggest a beaten earth floor. Ceramic remains included unidentifiable ERS A sherds, suggesting a 3rd century date. Other ceramic finds are also numerous but unhelpful for dating purposes, including Dekorphase 3b, and unidentifiable ESA and ARS sherds.

K.14's Late Roman IIb/Phase V was primarily identified due to the building activities associated with trench K.11, but

some minimal architectural changes in wall or roof supports suggest continued use of K.14. Additional storage bins of mud plaster and cobbles were also identified in this new phase. An ARS F50A sherd suggests a *terminus post quem* of the mid-3rd century, and this seems to be confirmed by a later 3rd century coin. The only other closely datable sherd was a residual ESA F56 (about mid-late 2nd century, Hayes 1985). No NPFW was found in this context.

It is worth noting the paucity of the NPFW throughout trench K.14, especially in the first two phases. The NPFW is ubiquitous in almost every other early Roman context from the RAP excavation and its absence from K.14's early phases is surprising. Coarse ware imports were present from Petra in large number, representing 38% of the total coarse ware from K.14. This is similar to other K.10 and K.11, which had 28% and 33% imported coarse ware respectively. However, it is difficult to make any claims as to the absence of the fine ware given the tertiary nature of the trench deposits.

DISCUSSION AND CONCLUSION

The three trenches, containing 175 identifiable NPFW sherds *in toto*, offer a compelling argument for the emergence of both Dekorphases, 3b and 3c. Dekorphase 3b is present in late 1st century CE contexts in two trenches, the dating of which is suggested not only by the stratigraphy, but also by the ESA and amphora sherds. In turn, Dekorphase 3c does not appear until Phase III—or the first late Roman context. As it was never found in the early Roman to late Roman transition contexts—even as intrusive—Schmid's date for the proposed emergence of Dekorphase 3c at the turn of the 2nd century CE seems correct.

This conclusion is further supported after a review of Phases II and III. Phase III itself is difficult to date by material found within the context, especially without NPFW, but the phases immediately before and after suggest a date range from the early 2nd to early 3rd century CE. K.14's ER/LR transition period contained numerous ESA dating until the end of the 1st century CE, but nothing later, and trench K.10 also contained an ESA sherd dating from the mid to late 1st century CE. The subsequent phase following LR I, that is, LR IIa, dates to the early 3rd century CE. This is supported by the contents of trench K.11, which contained a Class 47 amphora (late 2nd to 4th century CE), and a sherd of ERS A (again, not commonly found until the 3rd century CE). K.14 also contained unidentifiable ERS A sherds.

Other areas from Aila also suggest an early 2nd century CE date for the emergence of Dekorphase 3c, although the periods of abandonment in these areas around the time of the Roman annexation make it more difficult to determine such a specific date as Area K suggests. In Area M, Dekorphase 3c first appears in small quantities (16 sherds from seven different contexts) in LR I (early/mid 2nd century) and in larger numbers (n=41) in LR II (late 2nd/early 3rd century). In Area B, Dekorphase 3c was present in the LR I

period, believed to start quite early in the 2nd century. An ESA F57 from trench B.2 (about 100–150 CE), an ESA F51 in trench B.1 (about 70–120 CE), and ESA forms 51 and 54 in trench B.2 offer additional support for the phase's dating from the early to mid-2nd century.

The end date of Dekorphase 3b is more difficult to determine. The total number of Dekorphase 3b decreases in the LR IIb, only to dramatically increase in the Byzantine period, where it is most certainly residual. However, when looking at the data as a percentage of total sherds per phase, Dekorphase 3b finally loses ground to Dekorphase 3c for the first time since the latter's appearance during LR I. Area M offered a similar trend. During the LR II in Area M, dated from the early to mid-3rd century by imported diagnostic ARS sherds, Dekorphase 3c became more prominent. However, this general pattern does not confirm that Dekorphase 3b was no longer produced.

While the Roman 'Aqaba Project could not definitively establish terminus of Dekorphase 3b, the prominence of Dekorphase 3b throughout the site's history could be explained by its popularity in the late 1st century CE and perhaps into the 2nd century. This phenomenon is also paralleled at Humayma (Lindsay Holman, personal communication, 2014) and Petra itself (Wenner 2016). Additionally, excavations along Petra's North Ridge suggest that Dekorphase 3b began to decline almost immediately after the introduction of Dekorphase 3c, mirroring the shifts witnessed after earlier Dekorphase transitions. Without evidence to suggest otherwise, it may be acceptable to assume that Nabataean potters ceased the production of Dekorphase 3b after the introduction of Dekorphase 3c in the early 2nd century. The massive quantities in which it was produced and consumed make it so that it remains a common find in contexts where it is surely residual.

Until more stratigraphic reports and ceramic analyses from southern Jordan are published, the possible production of Dekorphase 3b alongside Dekorphase 3c can neither be confirmed nor denied, although it seems likely that the former Dekorphase disappeared sometime in the early 2nd century. As Aila was occupied from the late 1st century BCE until the Byzantine and Islamic periods, the Roman 'Aqaba Project cannot offer an answer to this question. This issue will seemingly be solved by the presence or absence of Dekorphase 3b in stratified contexts with occupation beginning in the mid 2nd century CE.

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How to cite this article: Wenner, S. (2021). Test of the Nabataean Painted Fine Ware typology in Aila's Area K, *Polish Archaeology in the Mediterranean*, 30/2, 595–610. https://doi.org/10.31338/uw.2083-537X.pam30.2.04

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