

CHAPTER 7



SOUTH ARABIAN POTTERY IN KHOR MUGHSAYL, OMAN: AN EARLY SETTLEMENT CONNECTION

William D. Glanzman

I have had the pleasure of knowing Professor Kent Brown personally since 2001, when we met and discussed various issues about the archaeology of South Arabia in the context of the annual meeting of the Seminar for Arabian Studies in Edinburgh. Subsequently, in 2005, I was asked by Kent to assist him in acquiring a permit to begin archaeological fieldwork in the Dhofar region of Oman, which was originally planned as a very brief and targeted expedition that followed up from Brigham Young University's earlier reconnaissance of the region from the perspectives of geology and botany. In 2006 we went to Oman for a series of meetings with H.E. Abdel Aziz Mohammed al-Rawas and Dr. Said Nasser Alsalmi in the Office of the Advisor to H.M. the Sultan for Cultural Affairs in Muscat, and with Mr. Hassan Abdullah Aljabri, Director of Land of Frankincense Sites, and Mr. Ghanim Said Ashanfari, the Site Supervisor in Salalah. Afterwards, our efforts were kindly rewarded, and the first field season of BYU's Dhofar project was launched in the summer of 2007, under Kent's coordination and codirectorship with Professor David J. Johnson from the Department of Anthropology at BYU, and myself representing Mount Royal's Department of Sociology and Anthropology. One of the interests of the project

that Kent relayed to me was whether or not there is evidence of occupation in the region dating to the sixth century BC.¹

Khor Mughsayl and Its Exploration

The Mughsayl region of the Rakhyut drainage system is situated approximately 40 km southwest of Salalah, which was known as al-Balid in the earlier Islamic sources.² The Mughsayl region is defined by the Wadi Ashawq which trends east-west and runs roughly parallel to the Dhofar coastline, where it turns southward toward the coast.³ Just as it turns, it has a confluence with one minor *wādī* system and its tributaries emanating from the coastal mountains to the north.⁴

The region was first explored archaeologically by Frank P. Albright in 1952–53, following the legendary, hasty escape from Marib of the team led by Wendell Phillips.⁵ Albright published in 1982 a

1. At present, we have undertaken three field seasons of the BYU Dhofar project. Team members in 2007 included: Professor S. Kent Brown as project coordinator; retired geologist Professor William Revell Phillips; Professor David J. Johnson as codirector and archaeologist; and Mr. Sidney Rempel, a PhD student at Arizona State University, as archaeologist and surveyor. Team members in 2008 and 2009 included: Professor Brown as coordinator; Professor Johnson as codirector and archaeologist; Dr. W. D. Glanzman from Mount Royal as codirector, archaeologist, and ceramicist; Ms. Gabriële Gudrian from the University of Münster as registrar; and Mr. Sidney Rempel as archaeologist and surveyor. During both 2008 and 2009 Mr. James Gee assisted as a volunteer. In 2009 we also had Professor John Robertson of Mount Royal assisted by his wife Evelyn Robertson as physical anthropologists and archaeologists. In each field season our representative was Mr. Mohammed Aljahfli.

2. Frank P. Albright, *The American Archaeological Expedition in Dhofar, Oman, 1952–1953* (Washington, DC: The American Foundation for the Study of Man, 1982), 51–69; Juris Zarins, *The Land of Incense: Archaeological Work in the Governate of Dhofar, Sultanate of Oman 1990–1995* ([Muscat]: Sultanate of Oman, 2001), 126.

3. Wm. Revell Phillips, “Mughsayl: Another Candidate for Land Bountiful,” *Journal of Book of Mormon Studies* 16/2 (2007): 50.

4. Phillips, “Mughsayl,” 50; David J. Johnson and W. D. Glanzman, *Excavations and Survey around Khor Mughsayl; Brigham Young University 28 June–25 July 2008*. Report submitted in 2008 to the Office of the Advisor to H.M. the Sultan for Cultural Affairs, and to Mr. Hassan Abdullah Aljaberi, Director of Land of Frankincense Sites, and to Dr. Said Nasser Alsalmi, Coordinator of Archaeological Work.

5. Albright, *American Archaeological Expedition*, 1; Wendell Phillips, *Unknown Oman* (London: Longmans, 1966), 191; Zarins, *Land of Incense*, 96.

brief report on the materials from those explorations in Dhofar, a few of which have been reexamined by Paul Yule.⁶ Prior to the arrival of the BYU expedition, the Mughsayl region was also cursorily reexamined by a survey team led by Juris Zarins in 1992-93 and again in 1995,⁷ yet most of his survey collection remains unpublished.⁸

In the 2007 field season six major sites were located in a brief reconnaissance survey. During the past two field seasons we have expanded our efforts to include more geological reconnaissance, and we conducted trench excavations at several locations within Mughsayl.⁹ During the 2007 field season, Brown, Johnson, and

6. Paul Yule and Monique Kervran, "More Than Samad in Oman: Iron Age Pottery from Suhār and Khor Rorī," *Arabian Archaeology and Epigraphy* 4 (1993): 79-83, figs. 3, 4; see Zarins, *Land of Incense*, 97. The publication of the Oman expedition of Wendell Phillips (see Phillips, *Unknown Oman*, 191) has not progressed for several reasons, one of which is the absence of Albright's and Cleveland's site notebooks, numerous artifacts, and many of their photographs from the official archives of the American Expedition for the Study of Man. In the early 1990s the author discussed by phone with Frank Albright the whereabouts of those records, but he was unable to recall. Later phone discussions with Ray Cleveland revealed that some of the documents and artifacts may have perished while under study in Palestine during the Israeli invasion of Jerusalem. Most of the material excavated from Khor Rori, however, seems to have survived. Prior to those discussions, the late Father Albert Jamme discussed the devastation caused by the fire in his office at the Catholic University of Washington, DC, during which some of the records may also have been lost.

7. Zarins, *Land of Incense*, 126, 128.

8. See Zarins, *Land of Incense*, fig. 33d, under "Mughsayl (49)," where at least 12 of the illustrated potsherds bear the site's prefix. Only seven artifacts were described in Albright's publication, *American Archaeological Expedition*, 113, catalog numbers 298-304.

9. Brown, Johnson, and I have focused excavations on three major sites: Site 2B, Site 2C, Site 3, and Sites 5E and 5W (see fig. 1). Site 2B is located on top of the tourist attraction known as al-Qaf (the "cave") at the al-Marneef promontory; this archaeological site is Zarins's "promontory fort" designated as "TA 93:50." (Zarins, *Land of Incense*, 128; see Phillips, "Mughsayl," 57, figs. 17 and 18.) Here, Johnson and Rempel uncovered very promising architectural remains that were barely exposed at the surface, suggesting the presence of something more than a watchtower. Site 2C is in the saddle below Site 2B and was briefly investigated in 2008. Sites 5E and 5W became a focus in 2008; we returned in 2009 to Site 5E, an ancient cemetery complex. (David Johnson, *Archaeological Preliminary Report, Excavations and Site Survey*, 2. Report submitted in 2007 to the Office of the Advisor to H.M. the Sultan for Cultural Affairs, and to Mr. Hassan Abdullah Aljaberi, Director of Land of Frankincense Sites, and to

Rempel excavated three trenches in the eastern part of Site 3, where they found substantial architectural remains largely covered up by deposition over the centuries.¹⁰ In 2008 I continued excavation here with Trench 3D.¹¹ We have also examined a substantial cemetery complex (Site 5E) as well as structures and sedimentation (Site 5W) at the head of the modern nature preserve; other sites have also been explored by reconnaissance survey (namely, Sites 1, 4, and 6).¹²

Location and Exploration of Site 3

Site 3 (fig. 1) is easily found today atop a limestone outcrop that seems to be the eroded remnant of an uplifted ancient beach, about 500 m from the modern shoreline.¹³ It is only about 100 m west of the modern nature preserve known as Khor Mughsayl.¹⁴ The perennial flow of the Wadi Ashawq today is facilitated by modern water pumps. Around the base of the plateau on which Site 3 was built

Dr. Said Nasser Alsalmi, Coordinator of Archaeological Work; Johnson and Glanzman, *Excavations and Survey*.) On an elevated terrace about 8 m above sea level west of the “blowhole” at the base of al-Marneef, below Sites 2B and 2C, Zarins encountered leached lithic materials; no site designation is provided. Sites TA 95:233 and TA 95:238, which he encountered in 1995, are seemingly extraction sites for raw lithic materials just north of the *khōr* itself in a now dry extension of it. (Zarins, *Land of Incense*, 72.) These must be very close to our Sites 5E and 5W.

10. Johnson, *Archaeological Preliminary Report*, 2.

11. Johnson and Glanzman, *Excavations and Survey*, 9-14.

12. See Johnson, *Archaeological Preliminary Report*, 1.

13. Phillips describes the outcrop as a “plateau” (“Mughsayl,” fig. 17); it seems to be an uplifted and eroded set of fossilized beach sediments (see fig. 1). See Zarins, *Land of Incense*, 26-31, 50, fig. 20, for a discussion of site location in relation to the geomorphology of the southern coast of Arabia, in particular the Salalah plain, during the remote prehistoric and Neolithic periods, and Zarins, *Land of Incense*, 67, 72, and figs. 25-28, for the relationship of Bronze Age site location to the geomorphological conditions of the Salalah plain, as well as mention of sites located on a terrace and in the dry lower reaches of Mughsayl. See also the discussion of Mauro Cremaschi and Alessandro Perego, “Patterns of Land Use and Settlement in the Surroundings of Sumhuram. An Intensive Geo-archaeological Survey at Khor Rori: Report of Field Season February 2006,” in *A Port in Arabia between Rome and the Indian Ocean (3rd c. BC-5th c. AD)*. Khor Rori Report 2, ed. Alessandra Avanzini (Rome: L’Erma di Bretschneider, 2008), for Khor Rori, especially the similarity with the sites with respect to the development of the lagoon and its sandbar.

14. Phillips, “Mughsayl,” fig. 21.



Figure 1. Photograph of Site 3 (center ground) from atop an undesignated site; view to SW. The promontory of al-Marneef is in the background, on top of which is Site 2B; Site 2C is in the saddle to its right. All photographs by the author unless otherwise noted.

are eroded caves, still unexplored archaeologically, that have been partially filled up with collapse debris and deposition; some have the remains of fish skeletons and wooden objects within them. To its north, between the outcrop and the low saddle, are the remains of field systems.¹⁵ To the northwest are a series of structures that probably relate to the modern farmstead, and to the west beyond several Islamic and some scattered, possible pre-Islamic burials is a small *wādī* with a modern gas station on its west bank.¹⁶

Our Site 3 was partially excavated and documented by Albright in 1952, and he provided the designation “habitation” for the site, which he placed as ca. 500 m west of “Ḥôr Muḡsayl” and ca. 400 m from the coastline.¹⁷ Today the local inhabitants identify the nature preserve as Khor Muḡsayl, while the modern community to the

15. Phillips, “Muḡsayl,” figs. 10, 20.

16. Phillips, “Muḡsayl,” fig. 17.

17. Albright, *American Archaeological Expedition*, 77. Albright erroneously refers to the site as located “southeast” of modern Salalah (ibid., 77). It is southwest of Salalah.

northeast along the coast is identified as al-Mughsayl.¹⁸ In Arabic the basic meaning of *khōr* is “lagoon” or “estuary,” a place where plant life is relatively abundant, which would include a place where a perennial freshwater source such as a river (Arabic *nahr*) flows into the sea,¹⁹ as at Khor Rori. This term seems to have been pronounced as “*kho*” by non-Arabic-speaking indigenous inhabitants as recorded by the Bents in the 1890s;²⁰ we assume they refer here to the Jibbali, who are Mahra speakers.²¹ Those meanings best fit the condition of the modern nature preserve and its immediately surrounding landscape, regardless of the flow of water down Wadi Ashawq.

Farmers with camel herds today are present in the Wadi Ashawq and the surrounding region. Given its position and relative ease of access into the Yemen, this *wādī* likely was one of the conduits for ancient camel caravans.²² Virtually every day we saw herds of camels coming into the *khōr* to graze and access fresh water from the bed of the *wādī* (fig. 2). While the role of the camel herd seems to have changed along with implementing more modern means of wrangling, camels are still used to transport the harvest of frankincense from the trees in the hills above the coast. There are literally millions of frankincense trees growing in this region of Dhofar. In antiquity it was the point of origin for much of the famous trade in aromatics; its remnants are found in the frankincense *sūq* in Salalah. Many of the traditions of the indigenous people of Dhofar are still present today, and caravans traversed the region as recently as the journey of the Bents.

18. The meaning of the site’s name, if Arabic (as opposed to a place name given by the local Jibbali population), may have something to do with a place of cleansing (personal communications with Gudrian, Johnson, and Ruth Altheim-Stiehl).

19. C. E. Bosworth and J. Burton-Page, “Nahr,” in *Encyclopaedia of Islam*, 2nd ed., ed. P. Bearman et al. (Louvain: Brill, 1993), 7:909b.

20. For example, Theodore Bent and Mrs. Bent, *Southern Arabia* (London: Smith, Elder, 1900), 275.

21. Zarins, *Land of Incense*, 131–32.

22. Phillips, “Mughsayl,” figs. 10, 11, and 20.



Figure 2. Camels and modern camel wranglers S of Site 3 are in the background; view to SSE. The expedition's white rental vehicle is parked beyond the collapse of Albright's Room L (Albright, *American Archaeological Expedition*, pl. 26, fig. 42).

Site 3 is only one of several archaeological sites near the mouth of the *khōr* of Wadi Ashawq. Informal surveys of the lower reaches of the Wadi Ashawq—part of the Rakhyut drainage system—by the BYU expeditions have revealed many other sites and surface remains, spanning remote prehistory through to the Islamic period.²³ Sites 5E and 5W, as well as a number of unexplored structures, are located adjacent to the head of the *khōr* proper. As yet, no geomorphological study has been conducted to determine the approximate location of the coastline in antiquity or of Site 3 in relation to it. It seems likely that the *khōr* silted up in recent time in a manner similar to that of Khor Rori some 80 km to the northeast, as both have a sandbar blocking the freshwater flow from the *khōr* into the sea.²⁴

23. For example, a major occupational site with probable burial structures is located in a saddle on the lower shelf of the extension of the mountains that separates Wadi Ashawq from the coast. A cursory surface survey of this site revealed it has only pre-Islamic artifacts along with numerous sea shells strewn about its surface, except where a modern access road has cut into its northern and eastern portions. In 2008 and 2009 Rempel discovered lithics attributable to the Palaeolithic, Neolithic, and Chalcolithic periods along the banks and on a beach exposure of the tributary flowing south into the *khōr*.

24. Phillips, "Mughsayl," figs. 5, 17, and 21.

Albright's excavation of the habitation site, which he suggested may have been a fishing village, focused upon the extant westernmost architectural complex atop the eroded outcrop. Here he discovered a series of rooms with mostly Islamic occupation, yet he speculated the presence of pre-Islamic occupation based on masonry characteristics.²⁵ Zarins surveyed this site and the adjacent areas during 1992, 1993, and 1995. Although he does not specifically locate or directly state which site is identified by his survey designation as the "Khor Mughsayl complex (TA 92:49),"²⁶ his citation to Albright's report makes that association clear. Hereafter, we shall refer to Albright's "habitation" and Zarins's "TA 92:49" as Site 3 of the BYU Dhofar project.

Stratified Sequence from Site 3

Site 3 was selected to excavate in part because Albright had excavated the first trenches at the site in 1952-53, and in part because it is such an easily encountered site near the *khōr* proper and close to the coastline. The BYU team excavated a series of three trenches in 2007 (Trenches 3A, 3B, and 3C), and in the 2008 field season we excavated a larger additional trench (Trench 3D; fig. 3). During the excavations



Figure 3. Kent Brown setting up for photographs of Trench 3D on Site 3; view to S, toward coast of Indian Ocean. Note the masonry debris of Albright's Rooms L on left and K on right (see Albright, *American Archaeological Expedition*, pl. 26, fig.42).

25. Albright, *American Archaeological Expedition*, 77-79.

26. Zarins, *Land of Incense*, 72, 128.

a relatively small quantity of potsherds was recovered from several deposits, some of which can be dated stylistically (see table 1). While absolute dates might be obtainable from ^{14}C analysis of some organic remains recovered in 2007, the analysis has yet to be undertaken; no coins or inscriptions have been found, and no glass or other datable artifact categories have been uncovered. For now, we must rely solely upon relative dating for the site's chronology, specifically upon stylistically datable pottery from stratified contexts.

Table 1. Comparative stratigraphy and chronology between trenches in Site 3 (2007–2008 field seasons), in reverse stratigraphic order (top to bottom) by locus.

TRENCH 3A	TRENCH 3B	TRENCH 3C	TRENCH 3D
000 (surface) ---	000 (surface) ---	000 (surface) ---	000 (surface) A
001 (topsoil) L	001 (topsoil) A, I, IRPW, L, LH	001 (topsoil) I, IRPW, L	001 (topsoil) D, IRPW, L
007 D, I, L	003 IRPW, L	003 A, D, I, IRPW, L, LH, SCB	003 IRPW, L
009 D, IRPW, L	004 / BR L	005 / BR I, IRPW, L, LH	002 A, D, I, IRPW, L
010 / BR IRPW, L	---	---	005 D, I, IRPW, L, LH
---	---	---	006 I, L
---	---	---	009 D, I, IRPW, L, LH
---	---	---	008 D, IRPW, L
---	---	---	010 / BR L
---	---	---	011 / BR L

- A Imported East and South Asian glazed wares
 D “Local” fabric wares with “dot-in-circle” decoration
 I Imported Islamic glazed wares
 IRPW “Indian Red Polished Ware”
 L “Local” fabric wares (with shell and/or limestone inclusions)
 LH Decorated Lug Handle in “local” fabric
 SCB Pre-Islamic South Arabian Shallow Carinate Bowl
 / BR Deposit rests on Bedrock
 --- No deposits, or recovered potsherds

As table 1 reveals, we have Islamic-period glazed ware imports in all of the deposits of Trench 3C, and all of the deposits except the bottommost two in Trenches 3A, 3B, and 3D. The rows of this table do not reflect anything more than the sequence of deposits; due to intervening walls, no secure stratigraphic correlations can be drawn between the four trenches apart from topsoil and bedrock. In the stratified sequences, only those bottommost deposits lacking Islamic glazed wares may be candidates for a pre-Islamic establishment and use of the eastern portion of the settlement; all of the others represent a mixture, deriving from later occupation and use of the site. The datable imports so far suggest an Islamic period occupation between the tenth and thirteenth or fourteenth centuries AD, with a possible extension as late as the sixteenth century AD.²⁷

So far, for parallels to probable pre-Islamic pottery we must rely almost exclusively upon Zarins's published survey and excavations. The comment by Zarins that his survey collection has definite parallels to his Iron Age B of Dhofar²⁸ can be accepted, however only with caution. The admixture of Islamic period imports in most of the excavated deposits makes it clear that one of two scenarios can be invoked to account for this site condition. On the one hand, the easternmost part of the site, at least, may have been heavily disturbed sometime after its initial occupation and use; that disturbance would have occurred during the Islamic period, yet our data cannot specify when. It is likely to have coincided with the major Islamic use of the westernmost part of the site, including the erection and use of a mosque, as well as an Islamic burial ground just outside and to the west of the mosque. On the other hand, it might also be the case that the wares Zarins cites continued in use into the early phases of the

27. William D. Glanzman, *Second Initial Report on the Excavated Pottery from Khor Mughsayl, Sultanate of Oman: BYU Project 2007 (Trenches 3A-3C) and 2008 (Trench 3D)*, 24-25. Report submitted in 2009 to the Office of the Advisor to Mr. Hassan Abdullah Aljaberi, Director of Land of Frankincense Sites, and to Dr. Said Nasser Alsalmi, Coordinator of Archaeological Work.

28. Zarins, *Land of Incense*, 128.

Islamic period.²⁹ This alternative suggestion is made more appealing by the presence of very similar “Indian Red Polished Wares” as well as incised and punctate decorations on the corpora from the Yemeni coastal sites of Sharma³⁰ and al-Shihr.³¹ Clearly, the nature of settlement use by indigenous inhabitants in the region of Dhofar must be examined in detail before we can determine which ceramic forms and decorations are exclusively “pre-Islamic” versus “Islamic.” Nevertheless, we can assert with confidence the presence of one imported pre-Islamic vessel type, the Shallow Carinate Bowl.

The Shallow Carinate Bowl (SCB): An Imported South Arabian Pottery Form

During the excavations conducted by Johnson at Trench 3C at Site 3, two potsherds stood out from all others. As we recorded in the pottery registry, two potsherds, KM 2007 3C3. 29 and KM 2007 3C3.30 (fig. 4), seemed to represent imported South Arabian wares. Upon reexamination and extensive post-field searches for parallels in the published literature, we can now assert that registered potsherd KM 2007 3C3.29 is the rim of a definite Shallow Carinate Bowl (SCB); KM 2007 3C3.30 is a body sherd that appears to come from a uniquely decorated carinate form, possibly from a bowl or jar. So far, potsherd KM 2007 3C3.29 stands alone, as no Iron Age

29. A similar argument exists for Zarins’s type fossil for the first to second centuries AD, the bowl with “dot-in-circle” motif (Zarins, *Land of Incense*, 97), which is commonly encountered in all mixed deposits at Site 3 (see table 1, and W. D. Glanzman, *Initial Report on the Excavated Pottery from Khor Mughsayl, Sultanate of Oman: BYU Project 2007*; report submitted in 2008 to the Office of the Advisor to H.M. the Sultan for Cultural Affairs, and to Mr. Hassan Abdullah Aljaberi, Director of Land of Frankincense Sites, and to Dr. Said Nasser Alsalmi, Coordinator of Archaeological Work). A continuation into the Islamic period for this decorative device on various media including ceramics is certain, and it is still used today. M. C. Ziolkowski and A. S. Al-Sharqi, “Dot-in-Circle: An Ethnoarchaeological Approach to Soft-Stone Vessel Production,” *Arabian Archaeology and Epigraphy* 17 (2006): 152–62.

30. Axelle Rougeulle, “Excavations at Sharma, Hadramawt: The 2001 and 2002 Seasons,” *Proceedings of the Seminar for Arabian Studies* 33 (2003): 296, fig. 10.1–4.

31. Claire Hardy-Guilbert, “The Harbour of al-Shihr, Hadramawt, Yemen: Sources and Archaeological Data on Trade,” *Proceedings of the Seminar for Arabian Studies* 35 (2005): 71, 78–81, figs. 4, 5.

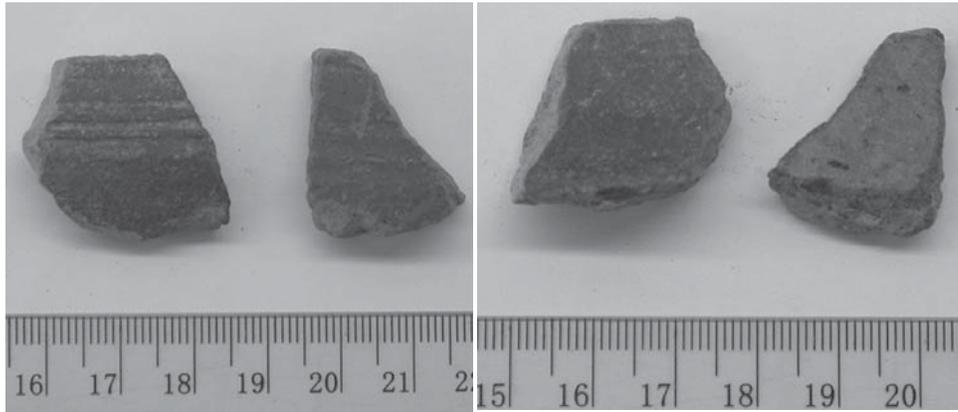


Figure 4. Two photographs of Shallow Carinate Bowl, registry KM 2007 3C3.29 on left of each image and unique organic-tempered carinate vessel, registry KM 2007 3C3.30 on right; exterior views in left image; interior in right. Photographs by the author and Anne Woollam.

pottery imports from South Arabia have been illustrated from any other site in Oman. Its characteristics are largely comparable to the South Arabian repertoire.³²

This potsherd comes from a vessel that was handmade, as were all of the “local” wares in the corpora from the trenches of Site 3. From hand specimen examination, it is composed of a very dense reduction-fired fabric that is different from the “local” pale brown wares, in that it lacks shell or limestone inclusions. Instead, it has only a minor quantity of organic temper and some small (less than 1 mm long) mica grains along with some rounded lithic inclusions, possibly of quartz.

Organic temper is a feature that characterizes the bulk of South Arabian pottery from sites within the hypothetical territories of the pre-Islamic kingdoms of Ma‘in, Saba’, Qataban and ‘Awsan. In the kingdom of Hadramawt, which generated the South Arabian colony that built up and controlled most, if not all, of the port complex

32. For a complete specimen from Hajar Surban in the Wadi Bayhan, see St John Simpson, *Queen of Sheba: Treasures from Ancient Yemen* (London: British Museum, 2002), 140–41; it belongs to the earlier first millennium BC. See also the organic-tempered wares from Hajar Ibn Humayd (*ibid.*, 139–40).

facilities at Khor Rori,³³ the pottery of all pre-Islamic phases is not as well published as one might expect, given the intensity of excavation programs conducted there within the past four decades. The published corpus from Shabwa³⁴ and that from Gertrude Caton-Thompson's initial excavations of the "Moon Temple" in the Wadi 'Amd, within Hadramawt³⁵ reveal that many of the wares have organic temper added by the ancient potters to render their clay body workable and plastic.³⁶ As a result, the wares are seldom dense, in contrast to our specimen. In this respect, it is more similar to a few of the examples of the wares from Caton-Thompson's excavations.

On our potsherd there is no burnished slip; instead, it has a mottled slip that exhibits only a surface sheen (see fig. 4). Mottling occurs either in the firing stage of production, often from use, or even from post-depositional alteration such as exposure to some burning material in the soil matrix of the site. Sheen in ceramics may result from sintering of a fine slip, from polishing the surface before firing, or from use if it was reheated and handled repeatedly. Sheen, however, is not a common characteristic for the SCB, whereas burnishing is the rule.³⁷

Our potsherd exhibits a shallow form with a slightly rounded carination and has a diameter of about 19.0 cm (fig. 5). The latter is fully within the range of the SCB rim diameters from Hajar ar-Rayhani in the Wadi al-Jubah, Hajar Ibn Humayd in the Wadi

33. Alessandra Avanzini, "The History of the Khor Rori Area: New Perspectives," in *Khor Rori Report 1*, ed. Alessandra Avanzini (Pisa: Edizioni Plus, Università de Pisa, 2002), 13-25.

34. Leila Badres, "Le sondage stratigraphique de Shabwa 1976-1981," *Syria* 67/1-4 (1991): 229-314.

35. Gertrude Caton-Thompson, *The Tombs and Moon Temple of Hureidha (Hadramaut)* (London: The Society of Antiquaries, 1944); see William D. Glanzman, "Arts, Crafts, and Industries," in *Queen of Sheba: Treasures from Ancient Yemen*, 116, and vessel descriptions in the catalog, 189-90.

36. William D. Glanzman, "Toward a Classification and Chronology of Pottery from HR3 (Hajar ar-Rayhani), Wadi al-Jubah, Republic of Yemen" (PhD diss., University of Pennsylvania, 1994), 137-41.

37. Glanzman, "Classification and Chronology of Pottery," 140.

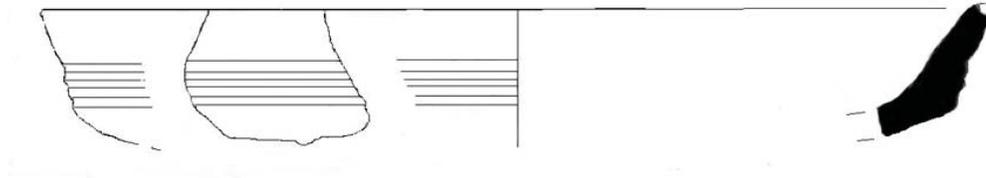


Figure 5. Pottery drawing of Shallow Carinate Bowl, registry KM 2007 3C3.29, drawn by the author.

Bayhan,³⁸ and elsewhere in South Arabia. Its thickness, varying between 5 and 8 mm, is a characteristic of the later production of the SCB in Saba⁷ and Qataban.³⁹ Three incised grooves are extant above the carination; the rim is chipped, but does not exhibit any other grooves; this compares well with the SCB in general, which has between one and five incised grooves, although they are usually placed higher and closer toward the rim top.⁴⁰

Taken together, the characteristics of our potsherd seem to derive from a slightly different—or merely a later—tradition of the SCB than exhibited by most of the South Arabian kingdoms. Like the Islamic period imports from the site, the vessel from which this potsherd derived may have entered Dhofar by camel caravan returning from the highland plateau or the Yemen, or even from al-Balid. Perhaps it was brought by caravaners conducting commerce in aromatics or as a gift brought back by them; it also may have arrived by boat from either ports in Yemen or as near as al-Balid. We simply have no evidence to invoke for its transport.

Dating the SCB at Site 3

No independent dating is available for Trench 3C, nor for any deposit from the trenches on Site 3. Since there is only one potsherd in question here, we cannot invoke any suggestions for development through time. Hence, we must rely on our dated parallels to establish its chronology.

38. Glanzman, “Classification and Chronology of Pottery,” 137–38.

39. Glanzman, “Classification and Chronology of Pottery,” 595–620, table 3.2.

40. Glanzman, “Classification and Chronology of Pottery,” 138, 140.

The form to which potsherd KM 2007 3C.29 belongs, the Shallow Carinate Bowl, is a classic South Arabian pottery form, one of the commonest encountered within the Yemen during the span of the late second millennium through to the fifth or fourth centuries BC.⁴¹ The cumulative evidence sifted from the most detailed publications on South Arabian pottery⁴² reveals that potsherd KM 2007 3C.29 is a late form. In the Yemen, the thicker variant appears later in the stratified sequence from Hajar ar-Rayhani.⁴³ The Shallow Carinate Bowl is eventually replaced by the Shallow Angled Bowl,⁴⁴ perhaps beginning around the sixth or fifth centuries BC.⁴⁵ This latter form continues in deposits that can be placed by calibrated radiocarbon dates within the late fourth to second centuries BC.⁴⁶ The date span for that replacement and for all aspects of the Shallow Angled Bowl, however, requires further study.

In reference to his Iron Age A of ca. 1300–300 BC, Zarins notes, “The ceramics, in contrast to the lithics, have little in common with the classical South Arabian sites in the west or North Oman to the east.”⁴⁷ In reference to his stratified excavations at Shisur, belonging to his Iron Age B of ca. 300 BC–AD 650, however, he does suggest the presence of South Arabian imports into the region: “The earliest ceramics are most likely the simple, typically red, burnished bowls. These are well-known from the South Arabic tradition, and can be considered to date the earliest phase of the fortress. Contemporary to this repertoire may be the black, shiny, carinate ware resembling

41. See Glanzman, “Classification and Chronology of Pottery,” 137–49, for a full discussion.

42. Caton-Thompson, *Tombs and Moon Temple*; Gus W. Van Beek, *Hajar Bin Humaid: Investigations at a Pre-Islamic Site in South Arabia* (Baltimore: Johns Hopkins Press, 1969); Badre, “Le sondage stratigraphique de Shabwa”; and Glanzman, “Classification and Chronology of Pottery.”

43. Glanzman, “Classification and Chronology of Pottery,” 140–41, table 3.2.

44. Glanzman, “Classification and Chronology of Pottery,” 148, 257–61, table 3.22.

45. Glanzman, “Arts, Crafts, and Industries,” 116.

46. Glanzman, “Classification and Chronology of Pottery,” 528–31.

47. Zarins, *Land of Incense*, 87.

Attic ware and thus part of the Seleucid era.”⁴⁸ His last comment about the presence of black, shiny carinate wares is very tempting for a possible parallel. Unfortunately, Zarins did not provide any citation for this supposed Seleucid (late Iron Age B) period parallel, nor did he illustrate any of these particular wares recovered from Shisur, so we have no comparable data for Oman or further afield.

The cumulative evidence, therefore, suggests that registered sherd KM 2007 3C.29 is the only candidate for an artifact whose date is close in time to the hypothesized sixth century BC arrival of migrants from the Levant. The questions of where it originated from and how it arrived are moot for the moment. Given the admixture of Islamic wares with “local” wares in Locus 003 of Trench 3C (see table 1), and the general developmental issues of its typological successor, we cannot assign the production or the use of this form exclusively to the sixth or even the fifth century BC.

Indeed, we have no publications of any stratified excavations for the entirety of Zarins’s Iron Age A or B. In the region of Khor Rori, for instance, where both Zarins and the Italian Mission have conducted regional surveys, and at the archaeological site itself, where the Italian Mission is actively undertaking in-depth excavations, there have not yet been any occupational remains excavated that can be placed with certainty earlier than the fourth century BC. The dating obtained from the excavations is based upon comparisons of pottery assemblages to Raybun and other sites in the Wadi Hadramawt, and upon radiocarbon dates from those sites.⁴⁹ Even

48. Zarins, *Land of Incense*, 112.

49. Alessandra Avanzini and Alexander V. Sedov, “The Stratigraphy of Sumhram: New Evidence,” *Proceedings of the Seminar for Arabian Studies* 35 (2005): 11-17; “Khor Rori: History and Geography,” at <http://arabiantica.humnet.unipi.it/index.php?id=772> (accessed 8 January 2010). Unfortunately, the recently published volume on Khor Rori (Avanzini, *Port in Arabia*) has very little synthesis of the excavated remains; it is, instead, an interim report with numerous illustrations and descriptions for the trenches yielding pottery and other datable finds of interest to our chronology.

the Iron Age component of al-Balid, which is said to have the characteristic Iron Age B wares of Dhofar,⁵⁰ has yet to be published.⁵¹

Connections to the Book of Mormon?

As a search through the relevant contributions in the archives of the online *Journal of Book of Mormon Studies* reveals (e.g., “Lehi’s trail,” “Nahom,” “Oman”), there are quite a few discussions concerning recent publications on Lehi’s trail and the sites in Oman where locations for the end point of Lehi’s migration have been suggested.⁵² Some of these discussions were written by several of the team members of the BYU expeditions to Dhofar in the 1990s and the current BYU Dhofar project, with Kent Brown weighing in on several issues such as the location of Nahom (Semitic root *NHM*). The main contenders in the literature seem to be Khor Rori, al-Balid (modern Salalah), and Khor Kharfot in the Wadi Sayq. In all cases, the connections are to a time period of ca. 600 BC or the early sixth century BC. Here, too, it is tempting to draw support for Lehi’s journey.

Archaeologists the world over are often tempted to draw equations to their research areas with the “earliest” example of some migration, artifact, or technology, as well as with historical events and characters. In the present case, as a cautious archaeologist and ceramic specialist, I would urge caution by all concerned who might want to suggest Site 3 has yielded evidence that can be linked to any particular group, indigenous or otherwise. Indeed, Kent most

50. Zarins, *Land of Incense*, 126.

51. Zarins (personal communications 2008, 2009) has noted there is a substantial Iron Age component at the site as well as an earlier Bronze Age component, and the tourist signage posted at the site and in the adjacent Land of Frankincense Museum note their presence, but the ongoing excavations for such a vast site suggest we will have to wait for quite a time before the publications will appear. In the meantime, we do have examples of various wares from the site, some of which seem to be pre-Islamic, published by Paul Yule and K. K. Mohammed, in *Report on Al-Baleed Pottery*, Reference Collection, Ruth-Aachen University (Muscat), Office of the Advisor to H.M. the Sultan for Cultural Affairs. The photographs are rather good, yet there is very little useful information contained in this brief report.

52. See Phillips, “Mughsayl,” 49, for a review of the candidates.

admirably made it clear from the beginning that the Foundation for Ancient Research and Mormon Studies and the Neal A. Maxwell Institute for Religious Scholarship would never try to impose any interpretation on the archaeological data; rather, he stressed the data should always “speak for itself.”

The data have spoken, and our caveat remains: the earliest occupation evidence we have recovered from Site 3 is the sole Shallow Carinate Bowl potsherd; it could date around the sixth century BC, although it may be a couple of centuries later, and we do not have any means of addressing where or when it was produced nor how it came to be at the site. Most importantly, we still have no way of addressing who may have been involved with its importation into Dhofar. Clearly, Site 3 and other sites in the area of Khor Mughsayl still have more to reveal about pre-Islamic times.

William D. Glanzman is associate professor of archaeology in the Department of Sociology and Anthropology at Mount Royal University in Calgary, Canada.