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Investigating the painted pottery traditions of first-millennium BC north-western Arabia and southern Levant: chronological data and geographical distribution

Juan Manuel Tebes

Summary
This paper studies the painted pottery traditions of first-millennium BC north-western Arabia and the arid margins of the southern Levant (Qurayyah, Tayma, Edomite/STNP, and al-ᶜUla wares) in light of the recent archaeological research in the area. The local painted wares were part of a larger cultural substratum, given their sharing of certain features — most particularly the use of distinctive patterns of painted decorations and iconography —, their similar patterns of geographical distribution and archaeological deposition, and their parallel development throughout time. Research on these painted pottery traditions has frequently been kept separate: this paper will attempt to bridge this gap in order to determine the relationship between them, making a reassessment of the old data in light of new research, focusing especially on their chronology, geographical distribution, and Arabian parallels.

Keywords: Qurayyah pottery, Tayma pottery, Edomite pottery/STNP, al-ᶜUla pottery, Iron Age

Introduction

In the last decades knowledge of the archaeology of first-millennium BC north-western Arabia and the arid margins of the southern Levant has increased significantly. Research on their pottery traditions, however, has frequently been kept as separate fields, despite the shared socioeconomic, cultural, and (very often) political history of both regions. Leaving aside the reasons for this state of affairs, this paper will attempt to bridge this gap in order to determine the relationship between the local painted wares, making a reassessment of the old data in light of recent archaeological research in the area.

During the late second and mid-first millennia BC the peoples living and moving in the arid areas of the southern Levant and north-western Arabia produced and used a set of different types of ceramics, both painted and non-painted. The local painted wares were part of a larger cultural substratum or 'horizon' (Bawden & Edens 1988: 211), given their sharing of certain features —, most particularly the use of distinctive painted decorations and iconography — their similar patterns of geographical distribution and archaeological deposition, and their parallel development through time. Recognition of the characteristics of these wares has allowed scholars to classify them into four main groups with a variety of names, presented here in rough chronological order (although a great deal of overlap existed): Qurayyah/Midianite pottery; Tayma/Sanaᵓiye pottery; Edomite/Busayra painted ware/Southern Transjordanian-Negev Pottery (STNP); and al-ᶜUla/Khuraybah pottery. Although a few scholars have made cross-cultural analyses of the morphology and decorations of some of these ceramics (Parr 1982; Bawden & Edens 1988; al-Ghazzi 2000; Bimson & Tebes 2009) and recent archaeological excavations have provided large amounts of new data, no comprehensive study of the four pottery groups exists to date.

This article is the first of two studies aiming at investigating in depth the chronology, geographical distribution, contexts of discovery, morphology, decoration, and parallels of the Iron Age painted traditions of the northern Hejaz and southern Levant. Here I will focus especially on their chronology, geographical distribution, and Arabian parallels, criss-crossing and comparing the pottery evidence of the most relevant sites, their stratigraphy and radiocarbon data, while the ceramics' decorative painted motives, iconography, and contexts of discovery are dealt with in the second study (Tebes, forthcoming), although some of its conclusions can be advanced.

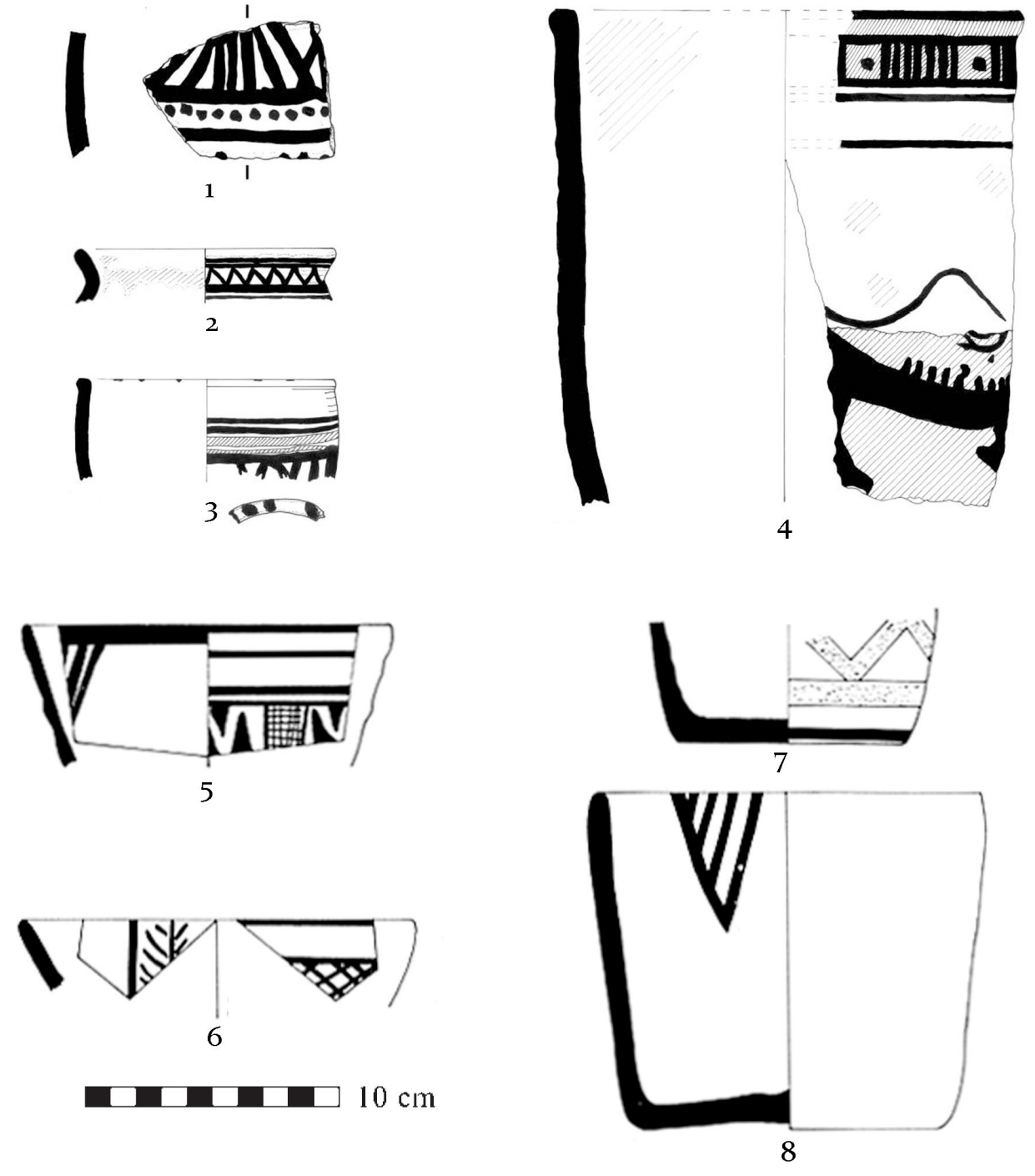

Figure 1. *Selected painted pottery from north-western Arabia and the southern Levant:* **1–4.** *Qurayyah pottery from Khirbet en-Nahas, Areas A and S (from Smith & Levy 2008: fig. 23/7,8,15,18. © 2008 American Schools of Oriental Research. All rights reserved. Reproduced here by permission of the American Schools of Oriental Research and T.E. Levy);* **5–8.** *Tayma pottery from Tayma (from Bawden, Edens & Miller 1980: pl. 63/2,8,17,18; reproduced here by permission of G. Bawden.)*

The feature that distinguishes the Iron Age Hejazi/southern Levantine ceramics is their painted decoration, characterized by a plethora of geometric motifs and, much less often, naturalistic iconography. Alongside these wares there also existed unpainted vessels that have not attracted the attention of scholars in the same way, such as plain pottery, vessels with incised or 'barbotine' decoration, and glazed forms. It is clear that the four traditions draw their motives from similar sources, and historically this should be seen against the background of a shared cultural substratum and the constant socio-political, cultural, and commercial cross-exchanges between the different local communities. It is possible to see a development from a restricted use of the painted wares only in special contexts (cultic, administrative, and mortuary) with the Qurayyah and Tayma wares, to more mundane activities such as cooking, storage, and trading areas with the Edomite pottery/STNP. Viewed from a long-term perspective, the recorded archaeological patterns of deposition exhibit a continuing trend towards a wider use of the painted wares in less restricted and elite contexts, revealing that commoditization is often found in such cases.

Geographical distribution and chronology: new data and interpretations

Qurayyah/Midianite pottery

Qurayyah pottery, also known as 'Midianite' ware, is a ceramic group comprising mostly tablewares (bowls) painted with tones of black, brown, red, and yellow applied to a thick buff or cream slip with a characteristic style (although undecorated vessels are also present), in which geometric patterns — especially horizontal and vertical lines, scrolls, triangles, zigzags, arches, dots, and joining semicircles — and occasionally bird and human figures conflate (Fig. 1/1–4). Petrographic studies make clear that the Qurayyah pottery was produced in north-western Arabia, while the site of Qurayyah is the only location that has produced evidence of their manufacture *in situ*. Its area of distribution covers the northern Hejaz, Transjordan (as far north as Amman), the Negev, southern Cisjordan (as far north as Tel Jedur near Hebron), and northern Sinai (with a western stray find at Bir el-ᶜAbd; for general studies see Rothenberg & Glass 1983; Tebes 2007) (see Fig. 6). The key site for discussions of this ceramic group is the Timna valley in the southern Negev, where excavations led by B. Rothenberg since the 1960s have found vast quantities of Qurayyah vessels amid the remains of copper mining dated to the last part of the Late Bronze and the Early Iron Ages. The dating of these wares was initially firmly established by the Ramessid remains found at a small local 'temple' dedicated to the worship of the Egyptian goddess Hathor (Site 200), where several painted Qurayyah bowls, together with Egyptian and Negevite wares, were deposited as offerings. Dated objects span the time between Pharaohs Seti I and Ramses V, traditionally the thirteenth and twelfth centuries BC (Rothenberg 1972; 1988).[1]

Due to the fact that Timna was (and still is) the only site with firm absolute dates for the Qurayyah pottery, it is usually argued that the latter was only produced during the short time span of Egyptian mining in the area. Thus, occurrence of Qurayyah sherds in post-twelfth-century BC contexts were explained as misidentifications of the original (earlier) layers by the excavators, or by referring to the existence of yet-to-be-identified strata dated to the twelfth century BC, or to the vagaries of surface finds (Bimson & Tebes 2009: 90–93). There is, however, an increasing amount of Qurayyah wares found in late archaeological contexts — thus contradicting the prevalent view — including Tel Masos/Stratum 2 (associated with Phoenician, Egyptian, and imitations of Mycenaean pottery: Fritz 1983: 87; Fritz & Kempinski 1983: pls 142/10, 148/11), the central Negev Highlands (Cohen & Cohen-Amin 2004: 8*, 141), ᶜEn Hazeva/Stratum 8 (found alongside Cypro-Phoenician black-on-red pottery), Givat Hazeva (Tebes 2007: 16–17; Bowman 2009: 5, figs p. 6, above), ᶜAin el-Qudeirat/Strata 4 and 3 (Bernick-Greenberg 2007: 140–141) — in all these cases the local pottery assemblages indicating an Iron Age IIA date —, Tell el-Kheleifeh (Pratico 1993: 43, 47, 49), Ghrareh/Area A (Hart 1989: 18, pl. 25/4), and Tawilan (Rothenberg & Glass 1983: 84; Hart 1995: 60) — southern Transjordanian sites where it overlapped geographically and chronologically with Edomite/STNP wares. New

[1] Other southern Levantine sites with Qurayyah ware finds that can be securely dated to the very Late Bronze/Iron Age I include the Amman Airport Structure (in the same context as Late Helladic IIA–IIIB, Late Cypriot Base Ring I and II, White Slip I and II pottery: Hankey 1995: 182, fig. 11, pl. 14/4); Tell el-Farᶜah (South) (in Building YR [the 'Governor's Residency'], where a cartouche of Seti II and a wooden box with Mycenaean motifs were found: Starkey & Harding 1932: pl. 63/42,52–56; Yisraeli 1993: 442; and in Tomb 542, associated with Egyptian or Egyptianizing wares and Philistine pottery: Rothenberg & Glass 1983: 82; Yisraeli 1993: 443); a burial cave at Tel Jedur (found alongside Late Bronze II–III, Late Minoan IIIA, and Late Helladic IIIA pottery: Ben-Arieh 1981: 120, 81*, pl. 5/1; Gonen 1992: 66); and Bir el-ᶜAbd (associated with New Kingdom pottery, scarabs from the Eighteenth Dynasty, a cartouche impression of Seti I, and Canaanite, Cypriot, and Mycenaean pottery: Rothenberg & Glass 1983: 83; Oren 1993: 1389).

Site	Context and material	Lab. code	^{14}C date BP	Cal. date BC 1ϱ	Cal. date BC 2ϱ	Program for Cal. and INTCAL dataset	References
[c]A. el-Qudeirat	Str. 4 – charcoal	GrN-12330	2930 ± 30	1210–1200 (5.5%) 1191–1177 (8.1%) 1162–1141 (12.7%) 1131–1107 (13.3%) 1103–1050 (28.6%)	1258–1235 (6.5%) 1215–1016 (88.9%)	OxCal v3.9 INTCAL98	Bruins & van der Plicht 2005: table 21.1
"	Str. 4 – seeds	AA69221	2875 ± 45	1130–970 (68.2%)	1210–920 (95.4%)	OxCal v3.10 INTCAL04	Gilboa et al. 2009: table 1
"	"	AA69220	2835 ± 40	1050–920 (68.2%)	1130–900 (95.4%)	"	"
"	"	RTA 6046.5 RTA 6046.3 RTA 6046.4	2830 ± 45 2855 ± 45 2855 ± 55 Weighted avg.: 2846 ± 28	Weighted avg.: 1050–970 (57.5%) 960–930 (10.7%)	Weighted avg.: 1120–920 (95.4%)	"	"
"	"	RTT 6047.4 RTT 6047.5 RTT 6047.3	2805 ± 40 2840 ± 40 2870 ± 45	Weighted avg.: 1025–930 (68.2%)	Weighted avg.: 1090–910 (95.4%)	"	"
"	"	GrA-32699 GrA-32738 GrA-32697	2810 ± 30 2840 ± 30 2840 ± 40	Weighted avg.: 1010–970 (44.1%) 960–935 (24.1%)	Weighted avg. 1040–910 (95.4%)	"	"
"	"	GrA-32741 GrA-32742 GrA-32737	2805 ± 30 2815 ± 30 2785 ± 30	Weighted avg.: 980–915 (68.2%)	Weighted avg.: 1005–905 (95.4%)	"	"
"	Str. 3 – charcoal	GrN-11948	2740 ± 110	1020–798 (68.2%)	1259–1232 (1.0%) 1217–758 (91.3%) 581–544 (1.2%)	OxCal v3.9 INTCAL98	Bruins & van der Plicht 2005: table 21.1
B. el-Hetiye	House 2	HD 13977	2743 ± 23	905–835		ND	Hauptmann 2000: table 7
Kh. en-Nahas	Str. A3 - charcoal	GrA-25318	2920 ± 35	1210–1045	ND	OxCal v3.10 INTCAL04	Levy et al. 2005: table 10.1
	"	GrA-25354	2880 ± 50	1185–1180 1125–945	"	"	"
	"	OxA-12366	2783 ± 31	1000–985	"	"	Levy et al. 2004: table 1; Higham et al. 2005: table 11.1
	"	GrA-25322	2680 ± 40	895–975 835–800	"	"	Levy et al. 2005: table 10.1
	"	GrA-25321	2660 ± 40	835–795	"	"	"
	Str. A2b – charcoal	GrA-25316	2815 ± 40	1005–905	"	"	"
	"	OxA-12367	2689 ± 31	900–875	"	"	Levy et al. 2004: table 1; Higham et al. 2005: table 11.1
	"	GrA-25314	2705 ± 35	895–825	"	"	Levy et al. 2005: table 10.1
	"	GrA-25315	2705 ± 40	895–825	"	"	"
	Str. A2a – charcoal	GrA-25334	2910 ± 50	1210–1010	"	"	"
	"	OxA-12368	2719 ± 33	900–805	"	"	Levy et al. 2004: table 1; Higham et al. 2005: table 11.1

	"	GrA-25311	2710 ± 35	895–825	"	"	Levy et al. 2005: table 10.1
	"	GrA-25312	2670 ± 35	890–885 835–800	"	"	"
	Str. S2b – charcoal	GrA-25345	2780 ± 45	995–840	"	"	"
	"	GrA-25344	2770 ± 45	970–835	"	"	"
	"	OxA-12168	2747 ± 26	905–830	"	"	Levy et al. 2004: table 1; Higham et al. 2005: table 11.2
	Str. S2a – charcoal	ND	2820 ± 35	1005–920	"	"	Levy et al. 2005: table 10.1
	"	GrA-25343	2720 ± 45	900–825	"	"	"
	"	OxA-12274	2682 ± 34	895–875	"	"	Levy et al. 2004: table 1; Higham et al. 2005: table 11.2
	"	GrA-25332	2715 ± 40	895–830	"	"	Levy et al. 2005: table 10.1
	"	GrA-25329	2705 ± 40	895–825	"	"	"
	Str. S1 - charcoal	GrA-25342	2795 ± 45	1000–895	"	"	"
	"	GrA-25326	2735 ± 35	900–835	"	"	"
	"	GrA-25324	2720 ± 35	895–830	"	"	"
	"	GrA-25325	2700 ± 35	895–810	"	"	"
	"	GrA-25328	2670 ± 35	890–885 835–800	"	"	"
R. Hamra Ifdan	Sounding A – seeds	OxA-14850	2849 ± 28	1050–941 (68.2%)	1115–926 (95.4%)	OxCal v4.0.5 INTCAL04	Levy et al. 2008: table S1
"	"	OxA-14849	2747 ± 28	914–842 (68.2%)	974–821 (95.4%)	"	"
Tayma	Area A/Phase 2 - charcoal	ND	ND	9th–8th centuries		ND	Eichmann et al. 2006: 107
Timna	Site 200 - charcoal	BM1117	2779 ± 55	999–847 (68.2%)	1108–811	OxCal v4.1 INTCAL09	Burleigh & Hewson 1979: 349; Ben-Yosef 2010: table 6.2; Avner, forthcoming: table 1
"	Site 2 - charcoal	BM2382	3220 ± 50	1530–1430 (68.2%)	1615–1414	"	Rothenberg 1990: 71; Ben-Yosef 2010: table 6.2; Avner, forthcoming: table 1
"	"	Rt5276	3125 ± 35	1440–1370 (60.0%) 1340–1320 (8.2%)	1500–1470 (3.4%) 1460–1310 (92.0%)	ND	Erickson-Gini, forthcoming: table 1
"	"	GrH4493	3000 ± 50	1370–1131 (68.2%)	1399–157	OxCal v4.1 INTCAL09	Rothenberg 1990: 71; Ben-Yosef 2010: table 6.2; Avner, forthcoming: table 1
"	"	Rt5279	2965 ± 40	1270–1120 (68.2%)	1370–1350 (1.5%) 1320–1040 (93.9%)	ND	Erickson-Gini, forthcoming: table 1

"	"	Rt5278	2965 ± 35	1260–1120 (68.2%)	1310–1050 (95.4%)	"	"
"	"	Pta4123	2880 ± 60	1189–943 (68.2%)	1261–910	OxCal v4.1 INTCAL09	Rothenberg 1990: 71; Ben-Yosef 2010: table 6.2; Avner, forthcoming: table 1
"	"	Rt5277	2920 ± 35	1200–1040 (68.2%)	1260–1230 (5.4%) 1220–1000 (90.0%)	ND	Erickson-Gini, forthcoming: table 1
"	"	BM1115	2840 ± 51	1109–919 (68.2%)	1192–849	OxCal v4.1 INTCAL09	Burleigh and Hewson 1979: 349; Rothenberg 1990: 71; Ben-Yosef 2010: table 6.2; Avner, forthcoming: table 1
"	Site 30/Layer 3 – seed	AA86517	2893 ± 39	1129–1008	1252–941	"	Ben-Yosef 2010: 574, table 6.5
"	" charcoal	AA84741	2855 ± 39	1111–939	1188–911	"	"
"	" wood	AA86516	2859 ± 34	1111–946	1129–919	"	"
"	" charcoal	AA86522	2858 ± 34	1111–943	1128–920	"	"
"	" bone	OxA2165	2650 ± 90	969–600	1022–516	"	Grigson 2012: 84
"	" charcoal	BM1598	2790 ± 50	1056–815	1003–851 (68.2%)	"	Burleigh & Matthews 1982: 165; Ben-Yosef 2010: table 6.2
"	Site 30/Layer 3–2 – charcoal	AA84740	2882 ± 38	1124–1006	1209–933	"	Ben-Yosef 2010: 574, table 6.5
"	Site 30/Layer 2 – charcoal	AA86521	2872 ± 34	1116–1003	1192–928	"	"
"	" seed	AA86518	2819 ± 35	1101–921	1113–896	"	"
"	" pit	AA86519	2814 ± 34	1006–921	1070–847	"	"

Figure 2. *Radiocarbon dates for contexts with findings of Qurayyah pottery, arranged by site, context, and approximate chronological order.*

archaeological information coupled with their respective radiocarbon dates are bringing forward the terminal date of the Qurayyah pottery by several centuries, at the same time putting in the right context old archaeological data that seemed to point in that direction but were discarded as too late for the Timna dates (for the following, see Fig. 2).

In the Timna valley, the recent excavations at Site 30 directed by E. Ben-Yosef have provided new radiocarbon dates well into the tenth century BC: the first substantial occupation was Layer 3, radiocarbon dated from the second half of the eleventh century BC to the first half of the tenth century BC, succeeded by Layer 2, dated from the end of the eleventh century BC to the second half of the tenth century BC. In these layers, Qurayyah pottery was found by this excavation and by Rothenberg's previous dig, associated with Egyptian and Negevite wares. The last phase, Layer 1, dated to the ninth century BC, was lacking Qurayyah wares (Ben-Yosef 2010: 569–570). Current excavations at Timna Site 2, however, are still giving ^{14}C dates in the range of the fourteenth to the twelfth centuries BC, with Qurayyah wares found in the same contexts (Erickson-Gini, forthcoming). These data, complemented with the New Kingdom finds at the Hathor sanctuary, point to a longer period of use of the Qurayyah pottery than previously thought, and go together with similar radiocarbon dates from the Sinai, Transjordan, and the Hejaz.

New ^{14}C data taken from the remains of the decades-old excavations at ʿAin el-Qudeirat in north-eastern Sinai, have provided dates in the tenth century BC for

Stratum 4 and the eleventh–eighth centuries BC (i.e. a large standard deviation) for Stratum 3, where Qurayyah pottery also was found (Bernick-Greenberg 2007: 140–141, fig. 11/24,25; Cohen & Bernick-Greenberg 2007: pl. 11/6,7). Pottery in Stratum 4 includes Iron IIA forms, Negevite, and Cypro-Geometric III vessels; Stratum 3 was found associated with Iron IIB forms, Negevite, and black-painted wares.

The district of Faynan in southern Transjordan is also important for findings of Qurayyah pottery radiocarbon dated to post-twelfth-century BC contexts. Until a decade ago the only dated Qurayyah wares from the area were those found at Barqa el-Hetiye in a context dated by ^{14}C to the ninth century BC (Fritz 1994: 144–145, fig. 12, pls 7–8), and associated with 'collared rim' pithoi and Negevite wares. These data are now supplemented by the recent digs at the fortress of Khirbet en-Nahas and the watchtower of Rujm Hamra Ifdan by the expedition directed by T.E. Levy. In the first site, the long list of radiocarbon dates has made clear that the Qurayyah pottery continued to be produced and used well into the tenth–ninth centuries BC (Smith & Levy 2008: table 9). This pottery was found in contexts associated with vessels with forms reminiscent of the later Edomite wares/STNP and Cypriot black-on-red pottery. In fact, in two loci — Areas A2a (L. 62) and S2a (L. 331) — it was found together with triangular-section rim bowls (BL3 type) with painted decoration in the form of black concentric lines on the inner surface and lines along the rim (2008: table 9, nos. 3,4,14). This bowl is a common feature of the Edomite/STNP wares found at the Edomite site of Buseirah, but it also has similar parallels in Iron Age II Cisjordanian sites and could be regarded as the earlier antecedent of the Buseirah type (Tebes 2009). Rujm Hamra Ifdan has produced Qurayyah pottery in Sounding A, associated with Negevite pottery (Levy et al. 2008: 16465), with two ^{14}C readings indicating tenth–ninth-century BC dates.

It has often been noted that the study of the Qurayyah pottery phenomenon has depended heavily on data coming from the southern Levant – an area actually in the 'periphery' of its distribution. Fortunately this picture is slowly changing. In Tayma, in the northern Hejaz, Qurayyah wares were found in Area A/Phase 2: a fragment of human terracotta figurine made of the whitish flaky clay characteristic of the Qurayyah pottery, and a sand-painted potsherd with representation of a typical Qurayyah-type bird. This layer has been radiocarbon dated to the ninth–eighth centuries BC (Eichmann et al. 2006: 107, fig. 9/12c,13a).

Tayma/Sanaʾiye pottery

Excavations conducted since the late 1970s by G. Bawden, C. Edens, H.I. Abu Duruk, and most recently by R. Eichmann at Tayma discovered a pottery tradition that seems to be a local and later version of the Qurayyah pottery. This is a group of painted bichrome wares known as 'Tayma' or 'Taymanite Painted Ware' (Bawden & Edens 1988; Abu Duruk 1990: 17), but also 'Sanaʾiye Pottery' (Hausleiter 2010), because the most recent excavations have found plenty of these ceramics in burials located in the Sanaʾiye ('Industrial') area, to the south of the central quarter of Tayma. The pottery from Tayma, decorated in brown or red on a light slip, is certainly a local variation of the Qurayyah pottery, as can be seen from the sharing of geometric motifs and, bird figures. Typical decorative motifs include net and chequerboard patterns, vertical and wavy lines, triangles, joining semicircles, and palm trees (Bawden & Edens 1988: fig. 5) (Fig. 1/5–8). Non-painted wares are also present, some of them with incised, 'barbotine', and glazed finish.

The Tayma painted ware seems to have been contemporary with the latest stages of the Qurayyah pottery, and possibly superseded it when the latter was no longer in use (for the following, see Fig. 3). Radiocarbon samples from the Sanaʾiye burials have given readings from the fifteenth century BC (from samples outside the tombs) to the eighth century BC (from samples inside the tombs) and, given the context where they were taken, the latter date seems preferable. Eichmann's excavations provided more recent and reliable radiocarbon data from the Talaʾ tombs near Tayma, where pottery similar to the Sanaʾiye wares was found, giving dates between the tenth and fifth centuries BC. In the Talaʾ burials '[f]ew sherds with eroded surfaces represent types of an earlier pottery (similar to the Qurayyah painted pottery[])' (Eichmann 2009: 63, n. 14), confirming the contemporaneity between the two pottery groups. The Sanaʾiye-type pottery is also found in the lowest building layers in the centre of Quraya — the central quarter of Tayma — (Area E/Level 5, Area F/Level 4), levels perhaps contemporaneous with the Neo-Assyrian and Neo-Babylonian periods (2009: 62–63, n. 14). Tayma painted pottery has also been reported at the Qasr al-Hamra (Abu Duruk & Murad 1986: pls 39/12,15; 40/21–25,27,30,32; 49; 51), a sanctuary probably built in the sixth century BC, although the original contexts of the pottery finds were not given. Five old radiocarbon dates from the Qasr al-Hamra would indicate a sixth-century BC date for the initial occupation at the site, although we lack information on their original contexts and their

Site	Context and material	Lab. code	^{14}C date BP	Cal. date BC 1σ	Cal. date BC 2σ	Program for Cal. and INTCAL dataset	Reference
Qasr al-Hamra	Floor Terrace B/Section 1/Level 3 – bone	GX-7101	2490 ± 130	540 ± 130	ND	ND	Bawden 1981: 150; Anonymous 1990: 62
"	Deep fill layer/Section 2/Level 3 – wood	GX-7103	820 ± 155	205 ± 140 AD	"	"	"
"	charcoal	ND	2480 ± 75	ND	"	"	Abu Duruk & Murad 1988: 30–32
"	"	"	2365 ± 65	"	"	"	"
"	"	"	2330 ± 75	"	"	"	"
Sanaʾiye tombs	1st Unit, bones outside the tombs (Square 8T)	"	3390 ± 240	1450	"	"	Abu Duruk 1989: 18; 1996: 22
"	1st Unit, bones inside the tombs (Square 7T)	"	2705 ± 130	750	"	"	"
Talaʾ tombs	Tomb 1007 – skull	"	ND	ND	987–924 (94.4%)	"	A. Beuger in Eichmann et al. 2010: 136, n. 67
"	Tomb 1015 – skull	"	"	"	890–832 (94.4%)	"	"
"	Fireplace south of Tomb 1011 – charcoal	"	"	"	764–482 (85.9%)	"	"
"	Tomb 1007/Area S	TA 380	"	760–568	785–432	"	Eichmann 2009: 63, n. 14
"	In front of door stone of Tomb 1011/Area S	TA 381	"	747–542	764–413	"	"
"	Tomb 1006/Area S	TA 388	"	757–541	762–412	"	"

Figure 3. *Radiocarbon dates for contexts with findings of Tayma pottery, arranged by site, context, and approximate chronological order.*

relationship with the pottery sherds. A. Hausleiter (2010: 233)[2] has identified as Sanaʾiye-type a bowl found in ʿAin el-Qudeirat/Stratum 4 previously recognized as 'Midianite' ware (Bernick-Greenberg 2007: 140; fig. 11/24; Cohen & Bernick-Greenberg 2007: pls. 11/6:1, 15/5:5). As we have seen, this layer has been dated by ^{14}C to the tenth century BC.

This new information has important ramifications for the chronological relationship between the Hejazi painted ceramics. Back in the 1980s, P. Parr and G. Bawden launched into a discussion on the nature and chronology of the pottery discovered at Tayma. Parr argued that the bichrome pottery discovered at Tayma belonged to the al-ʿUla type and therefore to the Persian period onwards (see Parr 1993; an argument followed by al-Ghazzi 2000), while Bawden's position was that it was actually a different, local kind of pottery — the so-called 'Tayma Painted Ware' — that could be dated to the sixth century BC or even earlier (see Bawden 1983; 1992; Edens & Bawden 1989: 54–58). The data provided by the recent excavations at the Sanaʾiye and Talaʾ burials seem to favour the latter view, thereby providing the 'missing link' between the Qurayyah and the al-ʿUla pottery traditions.

Edomite/Busayra painted ware/STNP

The northernmost painted ware tradition comprises a distinctive group of vessels manufactured and distributed throughout southern Transjordan (the ancient land of Edom) and the Negev during the Late Iron Age II, variously called 'Edomite' pottery (Glueck 1935: 123–

[2] Hausleiter's citation (2010: 233, n. 33) of Cohen & Bernick-Greenberg (2007) should be corrected from 'pl. 11.14, 11.6' to 'pls. 11/6, 15/5:5

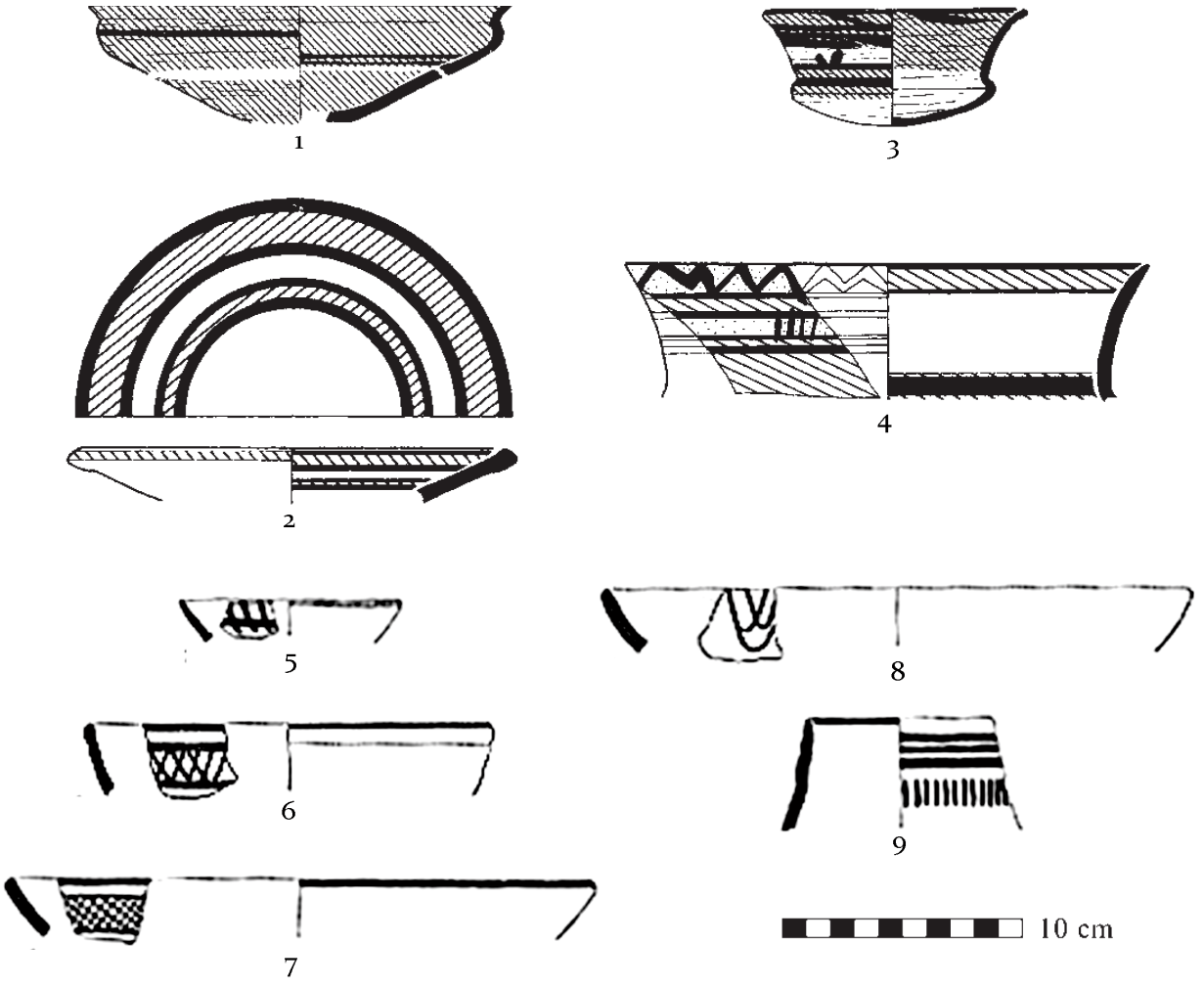

Figure 4. *Selected painted pottery from north-western Arabia and the southern Levant:* **1–4.** *Edomite pottery/STNP from Tel ᶜAroer II (from Thareani 2010: fig. 1/1,2,7,9. © 2010 American Schools of Oriental Research. All rights reserved. Reproduced here by permission of the American Schools of Oriental Research, Y. Thareani, and The Hebrew Union College);* **5–9.** *al-ᶜUla pottery from Khuraybah (from Parr, Harding & Dayton 1968–1969: fig. 5/1–3, 8,10; reproduced here by permission of P.J. Parr).*

137), 'Busayra Painted Ware' (Bienkowski & Sedman 2001: 319–320) or 'Southern Transjordanian-Negev Pottery' (STNP) (Tebes 2011). Vessel types in this group consist of bowls with downturned, grooved, and denticulated rims; cooking pots with a stepped rim; and vessels, mainly carinated bowls, influenced by 'Assyrian ware' pottery, painted with noticeable decorative patterns. The paint is applied on several types of bowls and kraters, consisting of tones of red, orange, or black arranged in geometric patterns, such as horizontal and vertical bands, triangles and nets, applied on the rim and on the outer surface. Plastic decoration is also present, in the form of indentations made with knives around the rim or body (Fig. 4/1–4).

Due to the lack of firm chronological data from Buseirah — the Transjordanian site that presents the largest and widest concentration of STNP — and the absolute lack of related radiocarbon dates, the best archaeological anchors available are the destruction layers distributed in several sites in the Negev area, such as Horvat Qitmit, Tel ᶜAroer, Tel ᶜIra, Tel ᶜArad, Tel Beersheba, Horvat ᶜUza, Tel Masos, and ᶜAin el-Qudeirat in north-eastern Sinai (Fig. 5). Two important historical events are significant in this regard: the military campaigns of the Neo-Assyrian

Date	Horvat Qitmit	Tel ᶜAroer	ᶜAin el-Qudeirat	Tel ᶜIra	Tel ᶜArad	Tel Beersheba	Horvat ᶜUza	Tel Masos
Eighth century BC		IV III	III	VII	X–IX VIII	III II		
Assyrian destruction, 701 BC								
Seventh century BC	Shrine	II	III II	VI	VII–VI	I	III	Area G
Babylonian destruction, 587/586 BC								

Figure 5. *General stratigraphy of the Negev sites with Edomite pottery/ STNP found in clear stratigraphic contexts (after Tebes 2011: table 1).*

king Sennacherib in 701 BC and of the Neo-Babylonian king Nebuchadnezzar in 597/587 BC. STNP wares found in Negev sites were concentrated between the destruction levels of these two events, and thus they can be used to date the whole pottery assemblage. Therefore, it is possible to date the STNP found in the Negev broadly between the late eighth and early sixth centuries BC (Tebes 2011: 81–83).

As already indicated, evidence from southern Transjordanian sites is far less conclusive, although it is clear that the STNP tradition survived the demise of the kingdom of Edom, a consequence of the Neo-Babylonian king Nabonidus' campaign in the area en route to Tayma, *c.*553 BC. This event is probably reflected in destruction layers found in the acropolis of Buseirah, and in Tawilan and Tell el-Kheleifeh, and now confirmed by a badly preserved relief of Nabonidus found in as-Silaᶜ (Crowell 2007: 80–84). At Umm el-Biyara, located on the summit of a hill overlooking Petra, an inscribed bulla referring to 'Qos-Gabr, King of Edom' and a Neo-Babylonian seal point to the seventh and sixth centuries BC as the dates for the occupation at the mound. A cuneiform tablet found at nearby Tawilan and dated to the accession year of 'Darius' is potentially full of chronological implications, yet it is difficult to know whether it is referring to the Persian king Darius I, II, or III. Moreover, the tablet was found in fill accumulations, making any association with an Iron Age/ Persian settlement impossible (Bienkowski 2013: 30–31).

The only site that possesses clear indications of a post-Iron Age/Persian period settlement is Buseirah. Critical are three Attic sherds dating to the late fourth century BC and five Hellenistic sherds dating as early as the late third century BC, while two of the Attic and one of the Hellenistic sherds were found in stratified contexts (in Area A/Phase 4) associated with local 'Iron II/Persian phase' pottery with 'some possible fifth to fourth-century BCE parallels' (Bienkowski 2013: 29; see also 2002: 90–91). Some of the local vessels show a clear continuity with Iron II STNP forms and decorations, such as the flat bowl with denticulated rim and painting on the rim (Bienkowski 2002: fig. 4/8:3; 2013: fig. 3/3; cf. Tebes 2011: STNP Bowl Type 1c, fig. 2/3). The conclusion is that in Buseirah the STNP continued to be used, with some continuities and some new forms, until *c.*300/200 BC, depending on whether one considers the Hellenistic sherds as stray finds or not.

al-ᶜUla/Khuraybah pottery

The least known and most probably the chronologically latest pottery group was first described in detail by Parr, Harding and Dayton from their survey in Khuraybah (1968–1969: 213, figs 6 & 7), and later by Bawden at Khief El-Zahrah (1979: pls 45–47), sites located in the area of al-ᶜUla, the seat of the ancient city of Dedan. Most of the pottery types belonging to this group are painted tablewares decorated with geometric patterns, particularly horizontal, vertical, zigzag and wavy lines, and net patterns; however, plain wares are also present (Fig. 4/5–9). Postulating a firm date for this pottery is difficult because of the lack of solid archaeological anchors in the al-ᶜUla area. Local inscriptions and associated material found in the sites of al-Khuraybah (al-Said et al. 2010; Alshehry 2011) and Tell al-Kathib (al-Zahrani 2007) would allow a date of the al-ᶜUla pottery between the fifth and the early second centuries BC (al-Said 2010: 268–269). An important development has been the recent finding of a painted sherd of al-ᶜUla pottery at the neighbouring site of Madāʾin Ṣāliḥ at Area 9/Phase 1, the earliest areal layer (Durand 2011: 332). Although found in a secure locus, no items providing absolute dates were retrieved in the same context, and therefore only an approximate dating around the fourth or third centuries BC can be established (Fiema 2011: 169).

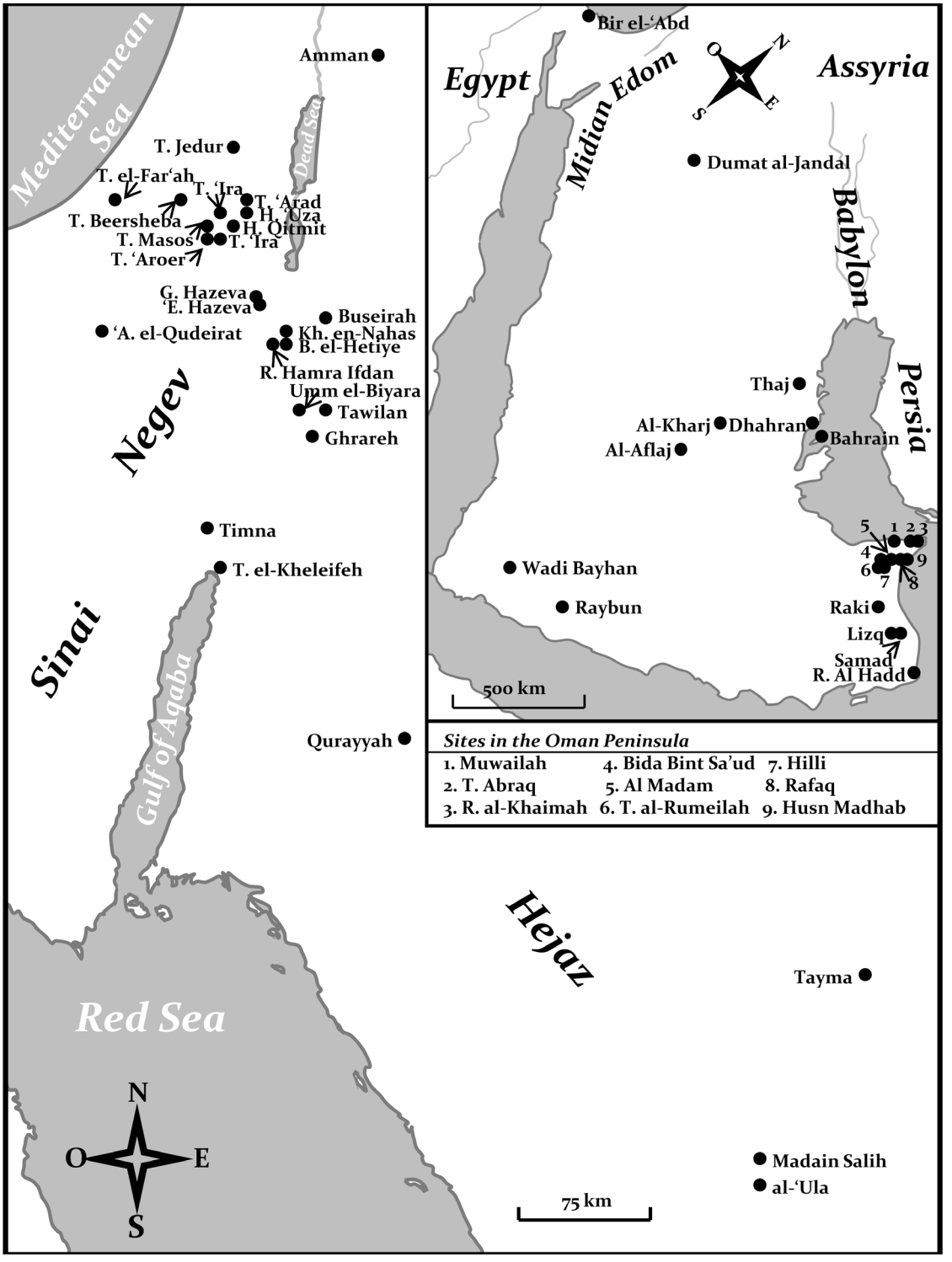

Figure 6. *Archaeological sites in Arabia and the southern Levant mentioned in the text.*

Based on the similarity of decoration between the al-ᶜUla wares and the 'Edomite' pottery, Parr suggested that the earlier 'could even be to some degree contemporary with the Edomite style', and given the fact that the bulk of the remains found at Khuraybah dates to the fourth–third centuries BC, he speculated that the al-ᶜUla pottery was a 'provincial derivative of the more elaborate "metropolitan" style of Buseirah and Tawilan' (Parr 1982: 131). The redating of the last stages of the STNP in the southern Levant has serious implications for the chronological and stylistic relationship between it and the al-ᶜUla ware. The evidence from the latest stages of Buseirah suggests (but does not prove conclusively) that some STNP forms were contemporary to the al-ᶜUla ware in vogue at that time in the Hejaz, and thus there is no need to postulate one as a derivation of the other, although it is possible to see some degree of influence in the style of painting.

Arabian parallels outside north-western Arabia

The Hejaz was not the only region in Iron Age Arabia where painted wares were produced and consumed, and current evidence seems to point to different traditions of painted pottery in the peninsula. While it is difficult to establish the dates of the development and the directions of transmission of these Iron Age traditions, the influence of the Bronze Age painted wares of the eastern Mediterranean (such as Mycenaean pottery) and eastern Arabia (e.g. Wadi Suq pottery) played an important role in their origin and expansion (Tebes, forthcoming). A significant drawback is that while clear parallels in form and decoration exist in several regions of the Arabian Peninsula, the lack of scientific examinations of the ceramic fabrics — e.g. petrographic studies or neutron activation analyses — prevents establishing whether we are dealing with Hejazi imports and thus with phenomena of diffusion, or with local developments. Fortunately this picture is slowly changing, particularly in the archaeology of south-eastern Arabia (see below). Moreover, the question of the influence of the Levantine ceramics into the Arabian pottery repertoire is a vexed issue that is often tangled with the old debate of cultural diffusionism vs. local development, particularly in the history and archaeology of south-western Arabia (de Maigret 2009: 163–186).

In northern central Arabia, earlier surveys did not find any Iron Age painted pottery (Parr et al. 1978: 42). Painted sherds of presumably Iron Age date, however, were found at Dumat al-Jandal (see Fig. 6) in different contexts: in trenches dug in the ancient quarter and the Muwaysin and in surface finds in the Zaᵓbal castle. The chequer decoration on sherds found in the ancient quarter has been related to the motifs present in 'Edomite' pottery (al-Muaikel 1994: 85–86, 216, 219, pl. 28/A,B).[3] Unfortunately, the recent excavations at Dumat al-Jandal have so far not found any pre-Nabatean pottery (Loreto 2012).

Several sites in central and eastern Arabia present Iron Age wares with geometric decorations paralleled in the Hejazi ceramics, such as Thaj/Levels 3 and 4 (Gazdar, Potts & Livingstone 1984: 81,82; pls 79/B, 80/A), tombs at al-Aflaj (Zarins et al. 1979: pls 25/181–183; 26/214), and al-Kharj (al-Ghazzi 2010: 145–148, pls 54–63).[4]

At the Iron Age sites of south-eastern Arabia painted ceramics are not very common, appearing particularly in the form of fine-ware small bowls or containers with red or black geometric designs (and on a few occasions naturalistic motifs such as ostriches and ibexes), occasionally painted on a red slip (e.g. Benoist 1999: figs 40/9–10; 57; 65; 73; 74; 109/23–28,32; 121/3,7,15,21,22; 137; 142/18; 165/1–9; 180/12–17; 184/20; 192; 197/13–14; 212/23–25; 215/1,13,16; 220/2–7; 224/1–4; 227/15–18,21,42; 230/7–10; 231/12,15,16; 244; 245/1,2,5,7–11; 246; 250; 255/9,14,15,38; 260/3–5,8,9; 261; 2001: 41, fig. 4/1–8; Yule 2001: Abb. 5.4.6/G12:1–4; 5.4.7/G12:9–11, G13:6,7; 5.4.8/G15:3,5,7). They concentrate on the Iron II period, at sites such as Tell Abraq, Muwailah, Husn Madhab, Rafaq, Al Madam, Bida Bin Saᵓud, Hili, Tall al-Rumeilah, Raki, Lizq, Raᵓs al Hadd, and Samad al Shān, with a decline in Iron III. They do not represent more than 2.5% of the total pottery corpus, and at most sites they comprise only 1% (Benoist 1999: 332, 338, 340, 391–392). Parallels for their geometric designs have been claimed in Bahrain (Al Hajjar, Isa Town), Iran, eastern and central Arabia (Dhahran, Layla-Aflaj region, Thaj), and the 'Midianite' ware (1999: 393–407; figs 272/1–14,19; 273; Magee et al. 1998: 243). Benoist even suggests that the 'Midianite' pottery, despite its (presumed) dating between the fourteenth and eleventh centuries BC, was the ultimate source for the decoration of the painted pottery of the Oman peninsula and perhaps

[3] K.I. al-Muaikel also reports painted sherds at Tuwayr (personal communication; al-Ghazzi 2010: 147).

[4] A.S. al-Ghazzi identified some of these finds as al-ᶜUla pottery (2000: 181), but they could also be local variants or pottery from other periods (such as the painted pottery from the Dhahran South tumuli, which certainly belongs to the second millennium BC; Zarins, Mughannum & Kamal 1984).

southern Iran (1999: 297; similarly al-Ghazzi 2010: 146).[5] The recent redating of Qurayyah ware and of its more local variant, Tayma pottery, sheds new light on, and adds support to, the claim of influence of the Hejazi traditions on Omani pottery.

Archaeologists excavating in south-western Arabia have already noted some similarities — especially in the use of burnished red slip — of the local pottery with assemblages from the Late Bronze/Iron Age Levant (e.g. van Beek 1969: 356–359; Badre 1991: 234, 242; Sedov 1996: 74–76; Breton 1998: 203–227).[6] In south-western Arabia, archaeologists at the site of Hajar Surbân 2 (Wadi Bayhan) found carinated cups with pedestal (goblets), with one or three incised lines on the rim, dated to the eighth–sixth centuries BC (Breton 1998: pls 12/SUR-2-1 to 5 and 12; 21/SUR-2-12). They are morphologically similar to the 'Assyrian/Edomite' cups and goblets so typical of the Late Iron Age southern Transjordan and Negev. These cups, however, do not present painted decoration; instead, they are red-slipped. Indeed, in south-western Arabia painted decoration is infrequent, whereas the most common treatment to the pottery surface was red-slipping and burnishing, very often complemented with incised and applied decoration (e.g. van Beek 1969: 93–99; Glanzman 1987: 68–71; Badre 1991: 277–279; Sedov 1996: 70; Arramond 1998: 197; Japp 2005). Isolated examples with painted decoration include vessels decorated with red and black painting against a light-coloured background found in the Hadramawt and dated to the late second millennium BC (Sedov 1996: 70–71, figs 2/7,11,12; 3/9–16; 4/1,2; 5/11–5; 6). A. Sedov saw some resemblance with the decoration of Qurayyah pottery (1996: 76), and it is possible to observe some sort of influence, particularly in the geometric designs and representations of birds (probably ostriches). Most of the birds, however, are painted in a very basic manner, without the specific features that are so frequent of the Qurayyah motifs; other animals represented, such as the ibexes, are not common in the Hejazi pottery at all. Another site with pottery portraying geometric painted decorations is Hajar Bin Humeid in Wadi Bayhan (van Beek 1969: figs 46/H3060,H2269,H2128; 50/H2064; pls 35, 36). Here, Parr (1982: 131) noted a cup with decoration reminiscent of the lattice design common to the al-ʿUla pottery (van Beek 1969: fig. 50/H2064; pl. 36/e), but the motif is also shared with the other Hejazi painted traditions. The same can be said about two sherds with painted linear designs found in Raybun in the Hadramawt (Harding 1964: pl. 20/10,11).

[5] Geochemical analyses with ICP (Inductively Coupled Plasma) on fine painted wares from several sites in south-eastern Arabia may point to southern Iran as the source of production of these wares (Magee 2010).

[6] I thank Dr Jérémie Schiettecatte (CNRS, France) for most of these references.

Conclusions

The amount of new data allows a fresh approach to the question of the chronological relationship between the four ceramics traditions. While the beginning of the Qurayyah pottery tradition is still firmly established as early as the thirteenth century BC, it is currently clear that its production and use probably lasted until the ninth century BC. The Tayma painted tradition, a later and local variant, probably emerged between the tenth and eighth centuries BC, and therefore both traditions were contemporary for one or two centuries, thus explaining the similarities in the geometric and naturalistic motifs. It is clear that early forms of the STNP developed in the Faynan district as early as the tenth century BC, and that by the sixth century BC the 'classic' STNP forms seem to have gone in the Negev and most of southern Transjordan. In Buseirah, however, some local forms continued to be produced, probably as late as *c.*300/200 BC, alongside the peak of the floruit of the al-ʿUla pottery further south, this one with good evidence as early as the fifth century BC, with mutual influences being palpable in the analogous geometric decorations.

Old and new excavations in the Arabian Peninsula show that these traditions did not exist in isolation, but rather coexisted with other autochthonous cultural practices in which decorating with geometric (and sometimes naturalistic) painted motifs was also common, particularly in eastern and southern Arabia, although it seems that among these communities this practice did not enjoy the popularity it certainly had in the Hejaz and further north.

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