

THE MEDIEVAL POTTERY FROM ḤORBAT YAGUR

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Excavations at Ḥorbat Yagur recovered pottery sherds dating from the second century BCE to the thirteenth–fourteenth centuries CE (see Sa'ad, this volume). This report discusses the medieval assemblage, beginning in the ninth century (Early Islamic period) until the fourteenth century (Mamluk period), which was retrieved in Area B, Strata III–I. As the deposits from these strata were mixed, the pottery is presented typologically, according to two main categories based on function: tableware and cooking ware, each further divided into unglazed and glazed wares. The fabric color is described according to Munsell's soil color charts (*Munsell Color Chart* 1994).

typical of the Mamluk period (late thirteenth century), are characterized by a light red, buff or gray ware, coarsely levigated and unevenly fired leaving a gray core. The fabric usually contains an abundance of white grits in various sizes and organic inclusions such as straw. Some jugs were slipped and burnished or incised and pinched, while others were white- or pink-slipped on the exterior surface with a painted decoration in red, brown or even black, usually of geometric patterns. The vessels were coil made and often shaped by a cloth with a prominent warp and weft texture (linen or jute cloth), traces of which can sometimes be observed on the finished product. Although such jugs have been revealed in Crusader and Ayyubid occupation levels at Yoqne'am (Avisar 1996:169), Jerusalem (Tushingham et al. 1985: Figs. 37.18; 38.32) and Ḥama (where they began to appear in the late twelfth century; Riis and Poulsen 1957:270–274), all other

TABLEWARE

Unglazed Ware

Hand-Made Jugs With or Without Painted Decorations (Fig. 1:1).— At Yagur, these jugs,

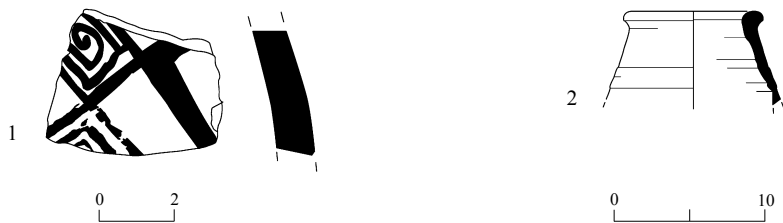


Fig. 1. Tableware: unglazed jugs.

No.	Locus	Basket	Description
1	808	8008	Gray fabric 2.5YR 6/9, coarse; white grits, grog and organic inclusions; thick white slip on outer surface, under black-painted geometric pattern
2	716	7029	Red fabric 10R 4/8, fine; abundance of white grits; unevenly fired with light red–pinkish surface and thick gray core; D rim 4 cm

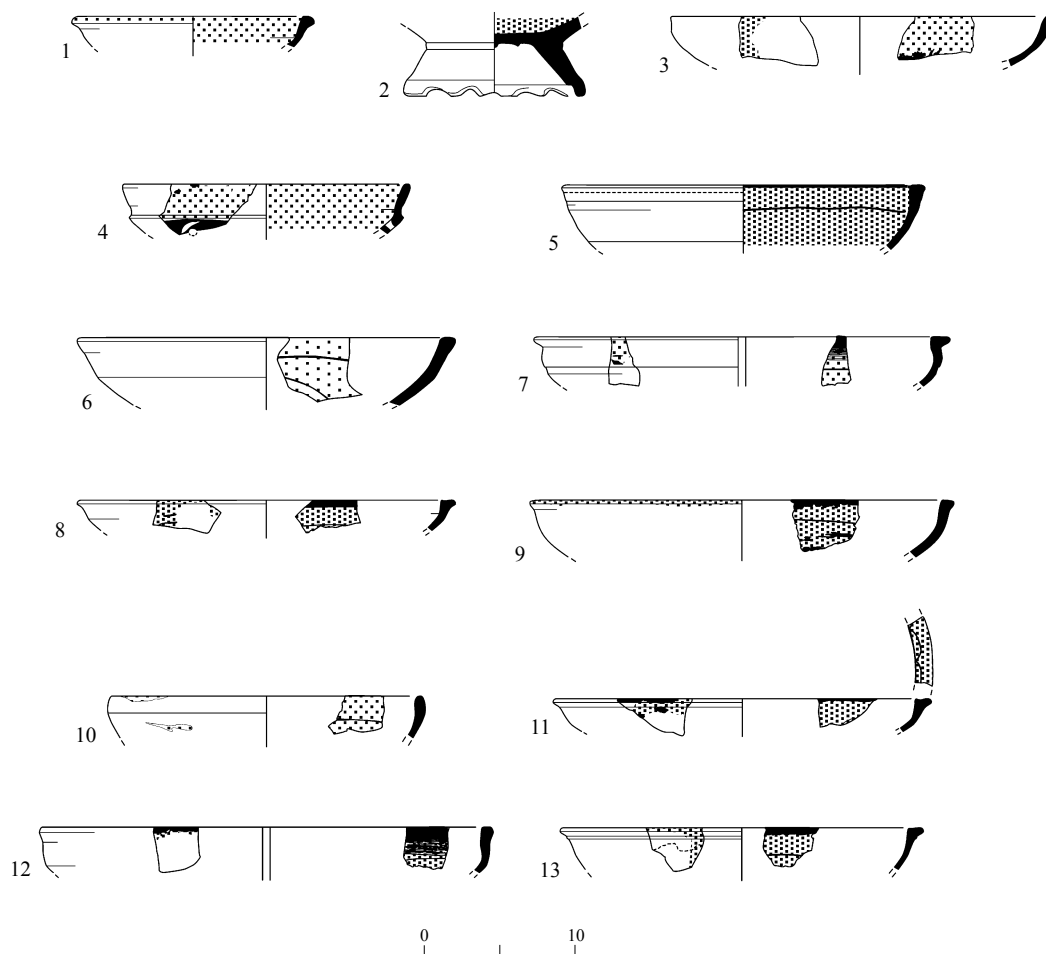


Fig. 2. Tableware: glazed bowls.

reports of this type date to the Mamluk period (Baramki 1944:71; de Vaux and Stéve 1950:133; Pringle 1984:95; 1985:176; Tushingham et al. 1985: Fig. 42.15–18; Whitcomb 1988: Fig. 1.4.B; Johns, McQuitty and Falkner 1989: Fig. 25; Mcquitty and Falkner 1993: Fig. 19.12; Arnon 2008:365–366; Stern and Tatcher 2009: Fig. 3.20:5).

Mamluk Plain Jugs (Fig. 1:2).— The jugs of this group are made of red–brown to orange–brown fabric, are relatively well-levigated and contain an abundance of white grits in various sizes. All the specimens at Yagur were fired to a buff, light orange or light red surface. The neck is relatively high and conical in shape, and the

rim is slightly thickened, everted and triangular in section. Similar jugs were retrieved at Abu Ghosh (de Vaux and Stéve 1950: Pl. G:25) and Yoqne‘am (Avisar 1996:167, Type 24), and were attributed to Mamluk occupation layers.

Glazed Ware

Monochrome Glazed Bowls (Fig. 2:1–4).—

The main characteristic of this group is the single-hued lead glaze that was applied to the vessels after biscuit firing. The fabric ranges in color from light red–orange to dark red and is usually relatively well-levigated, containing an abundance of small white grits (resembling cooking-ware fabric). The outer surface was often smoothed or trimmed with a sharp tool.

◀ Fig. 2

No.	Locus	Basket	Description
1	718	7042	Red fabric 10R 4/8, fine; abundance of white grits; white-slipped int. under shiny yellow glaze; D rim 7 cm
2	715	7061	Orange fabric 2.5YR 6.6, coarse; crudely made and fired; abundance of white grits, grog and basalt inclusions; white-slipped int. under shiny, bubbled, dark brown-green glaze; D base 5.5 cm
3	726	7039	Dark red–brown fabric 2.5YR 3/6, fine; abundance of small white grits; white-slipped int. under color-splashed glaze in green, yellow and manganese; D rim 13.75 cm
4	611	6020	Orange fabric 2.5YR 6/6, fine; abundance of white grits and grog inclusions; white-slipped int. and ext. under shiny green glaze int. and color-splashed green and brown ext.; D rim 10 cm
5	732	7061	Red fabric 10R 4/8, fine; abundance of white grits; white-slipped int. under shiny green glaze, sgraffito decorations; D rim 10.5 cm
6	715	7033	Red fabric 10R 4/8, fine; abundance of white grits; white-slipped int. under shiny yellow glaze, sgraffito decorations; D rim 10.5 cm
7	804	8018	Dark red–brown fabric 2.5YR 3/6, fine; white-slipped int. under shiny yellow glaze, sgraffito decorations; D rim 15 cm
8	804	8018	Red fabric 10R 4/8, fine; abundance of white grits; white-slipped int. and ext. under shiny green glaze, sgraffito decorations; D rim 13.75 cm
9	806	8024	Red fabric 10R 4/8, fine; abundance of white grits; white-slipped int. and ext. under shiny green glaze, sgraffito decorations; D rim 15 cm
10	804	8018	Dark red–brown fabric 2.5YR 3/6, fine; abundance of small-sized white grits; white-slipped int. and ext. under yellow glaze, sgraffito decorations; D rim 11.25 cm
11	804	8018	Red fabric 10R 4/8, fine; abundance of small white grits; white-slipped int. under shiny green glaze, sgraffito decorations; D rim 13.75 cm
12	806	8024	Red fabric 10R 4/8, fine; abundance of small white grits; white-slipped int. under shiny yellow glaze, sgraffito decorations; D rim 16.25 cm
13	804	8018	Red fabric 10R 4/8, fine; abundance of small white grits; white-slipped int. under shiny yellow glaze, sgraffito decorations; D rim 12.5 cm

The inner surface is always white- or pinkish-slipped under a thick, shiny, monochrome lead glaze of mustard yellow or green. This type of glazing was designated by Pringle as ‘Monochrome Glazed Slipped Ware’ (Pringle 1985:177) and is well recorded at medieval sites, such as Yoqne‘am (Avisar 1996:91), Caesarea (Arnon 1999:227, Fig. 11j), Jerusalem (Tushingham et al. 1985: Fig. 34.24–32), Burj al-Aḥmar (Pringle 1986: Fig. 49.50–57), St. Mary of Carmel (Pringle 1984:25–29), Tel ‘Arqa (Hakimian and Salamé Sarkis 1988:12, Type AIII) and in the Aegean islands (Armstrong 1991: Figs. 7.19; 7.20). The bowl in Fig. 2:1 has a flaring body and various types of ring bases (Fig. 2:2); it dates to the Crusader and Ayyubid periods (late twelfth–thirteenth centuries; Ben-Tor 1963: Fig. 12.6; Megaw

1971:123, 142–146; Thalmann 1978:30, Figs. 33.6–11; 34.1–15; 35.59; Salamé Sarkis 1980:191; Pringle 1985: Fig. 3.15; Tushingham et al. 1985:143; Hakimian and Salamé Sarkis 1988: Fig. 6.2, Type AIII.1; Avisar 1996: Types 34–38).

Some of the bowls from Stratum II were of the carinated and incurved type (Fig. 2:4), typical of the Mamluk era, as seen at Yoqne‘am (Avisar 1996:96), Ḥorbat Shema‘ (Meyers, Krabel and Strange 1976:214–221), Meron (Meyers, Strange and Meyers 1981:124), Giv‘at Yasaf (Stern 1999:132), Ḥorbat ‘Uza (Stern and Tatcher 2009: Fig. 3.25:2) and in Transjordan (Brown 1991:233).

Monochrome Glazed Bowls with Sgraffito Decorations (Fig. 2:5–13).— The sgraffito-

decorated bowls are distinguished mainly by the incised decoration. The origin of this style lies in Egypt of the fifth–seventh centuries, where it was influenced by Coptic art. The style was then imported into Mesopotamia and Iran, where it flourished during the tenth–eleventh centuries (Fehervari 1973:61–62). The space to be decorated was coated with a white or light-colored slip by pouring or dipping, while the vessel was leather hard;

then, the decorations were incised through the layer of slip so that the original color of the clay was visible. After firing, the vessel was coated with a monochrome glaze and fired for a second time. The final result was an incised decoration in a darker tone. The sgraffito-decorated vessels became very popular in the Byzantine world (Papanikola-Bakirtzis 1999) and are well recorded at medieval sites (Megaw 1972: Fig. 22; Thalmann 1978:24–26, Types

Fig. 3 ▶

No.	Locus	Basket	Description
1	746	7085	Red fabric 10R 4/8, fine; abundance of white grits; white-slipped int. and ext. under shiny green glaze, sgraffito decorations on int. only; D rim 11.25 cm
2	715	7024	Red fabric 10R 4/8, fine; abundance of small-sized white grits; white-slipped int. and ext. under shiny yellow glaze, sgraffito decorations on int. only; D rim 6.25 cm
3	718	7054	Red fabric 10R 4/8, fine; abundance of small-sized white grits; pinkish-slipped int. and ext. under shiny green glaze, sgraffito decorations on int. only; D base 7 cm
4	713	7024	Red fabric 10R 4/8, fine; abundance of small-sized white grits; pinkish-slipped int. and ext. under shiny, light-green glaze, sgraffito decorations on int. only; D rim 14 cm
5	813	8038	Red fabric 10R 4/8, fine; abundance of white grits; white-slipped int. and ext. under shiny green and yellow color-splashed glaze; D rim 15 cm
6	806	8024	Red fabric 10R 4/8, fine; abundance of small white grits; white-slipped int. and ext. under shiny yellow glaze, sgraffito decorations; D rim 17.5 cm
7	602	6011	Red fabric 10R 4/8, fine; abundance of small white grits; white-slipped int. and ext. under color-splashed glaze in green and yellow, gouged decoration; D rim 15 cm
8	602	6011	Dark red-brown fabric 2.5YR 3/6, fine; abundance of small white grits; white-slipped int. and ext. under yellow glaze, sgraffito decoration on int. only. Rim D 10 cm
9	611	6026	Red fabric 10R 4/8, fine; abundance of small white grits; white-slipped int. and ext. under color-splashed glaze in green and yellow; D rim 10 cm
10	704	1006	Red fabric 10R 4/8, fine; abundance of small white grits; white slip-painting under yellow glaze; D rim 14.25 cm
11	602	6004	Orange fabric 2.5YR 6/8, fine; abundance of white grits and grog inclusions; white slip-painted bands under yellow glaze; D rim 12.5 cm
12	716	7029	Red fabric 10R 4/8, fine; white-slipped int. under shiny green and yellow, color-splashed glaze; D rim 11.25 cm
13	715	7024	Orange fabric 5YR 7/6, fine; well-made, fired to yellowish-buff surface; white-slipped int. under shiny green and yellow, color-splashed glaze; D rim 12.5 cm
14	731	7058	Dark red-brown fabric 2.5YR 3/6, fine; abundance of small-sized white grits; white-slipped int. under yellow and brown color-splashed glaze; D rim 6.25 cm
15	804	8018	Dark red-brown fabric 2.5YR 3/6, fine; abundance of small-sized white grits; white-slipped int. under green and brown color-splashed glaze; D rim 15 cm
16	813	8038	Buff fabric 2.5Y 8/2, fine; slip-painted decoration in green and manganese under transparent glaze; D rim 15 cm
17	706	7039	Red fabric 10R 4/8, fine; abundance of small white grits; white-slipped int. and ext. under slip-painted decoration in green, yellow and manganese, under transparent glaze; D rim 10 cm
18	706	7039	Light orange fabric 5YR 7/6, fine; well-made; white-slipped int. under slip-painted decoration in green, yellow and manganese, under transparent glaze; D rim 13.75 cm

C, D; Tushingham et al. 1985: Fig. 39.21; Pringle 1985:183; 1986:150; Hakimian and Salmé Sarkis 1988:3, Type AI, Fig. I), where the suggested dates fall within the twelfth–fourteenth centuries.

The examples from Yagur were produced of red fabric, resembling that of the cooking vessels, relatively well-levigated and containing small white grits. All have a white-slipped interior under a yellow (Fig. 2:1) or green glaze (Fig. 2:2), and most of the bowls were decorated with incision on the inner surface. This style is recorded at Yoqne'am and Ḥammāt Gader and dated to the twelfth–

thirteenth centuries (Avissar 1996:98, Type 47, Fig. XIII.35; Boas 1997:391).

Monochrome Glazed Bowls with Sgraffito Decorations, Serçe Limani Type (Fig. 3:1–9).—

Most of the sgraffito-decorated glazed bowls from Stratum III resemble bowls that were recovered in the Serçe Limani shipwreck near the Turkish coast, which was dated to the first quarter of the eleventh century (Bass and van Doorninck 1978: Fig. 7:12; Jenkins 1992:61). This type of bowl is made of red clay, resembling cooking ware, with a white or pinkish slip applied on the inner and

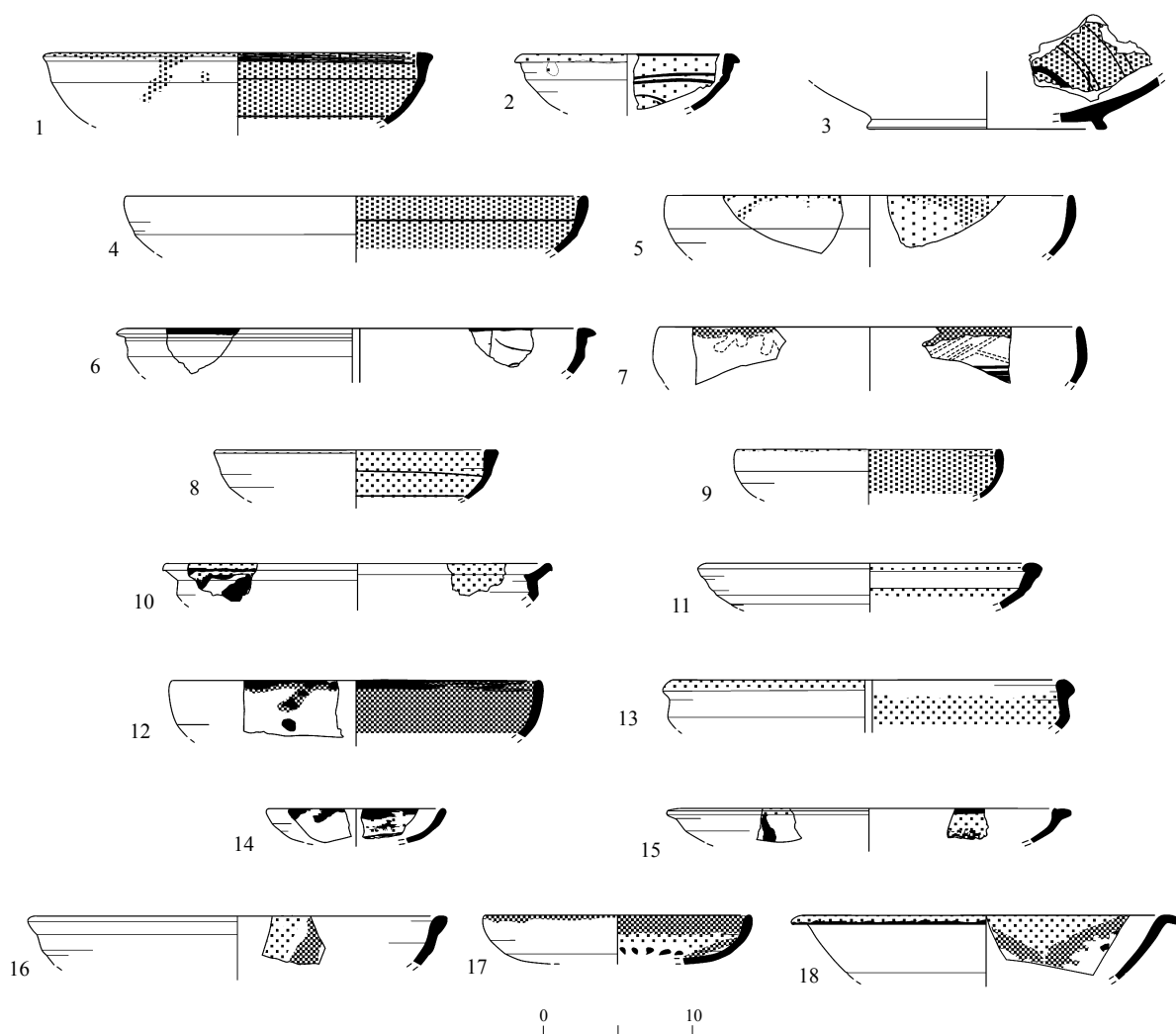


Fig. 3. Tableware: glazed bowls.

outer surfaces under a lead glaze of various colors, and sgraffito decoration on the interior only. Such bowls have been found at 'Akko (Arnon, forthcoming), Yoqne'am (Avissar 1996: Type 28, Pls. XIII.19:1; XIII.19:3) and Kh. Abu Suwwana (Finkelstein 1997: Fig. 3.12). Although dated to the Crusader period at Yoqne'am, Caesarea (Pringle 1985:183, 'Coarse Sgraffita Ware') and Kh. Abu Suwwana, it seems that this type of bowl first appeared in the eleventh century, prior to the Crusader conquest. Based upon a well-stratified deposit at Caesarea, a similar date within the first quarter of the eleventh century was arrived at for Serçe Limani-type bowls (Arnon 2003:208). Two of the bowls from the Serçe Limani shipwreck were compared petrographically with six bowls from Caesarea and proved to share the same petro-fabric, pointing to a source along the southeastern shore of the Mediterranean (Mason et al. 1992:70).

Under-Glazed Slip-Painted Bowls with Yellow or Transparent Glaze (Fig. 3:10, 11).— This group is characterized mainly by its finely levigated and well-made, orange, red or light brown ware. A slip-painted decoration was usually applied to the interior surface below a transparent or yellow glaze. Most of the Yagur examples are of two types: in the first type, the decorations were white or cream-colored on a red-brown background: in the second, the white-slipped paintings have a yellowish tinge (Fig. 3:11). At Yoqne'am, most of the under-glazed, slip-painted bowls, especially the carinated ones, originated in Mamluk strata, although they were retrieved in a late twelfth-century stratum (Avissar 1996:96). While green-glazed bowls already appeared in Crusader loci at some sites, it seems that the yellow-glazed style was preferred in the Mamluk period. The yellow-glazed bowls are well-known throughout the eastern Mediterranean during the late twelfth–fourteenth centuries (Baramki 1944: Fig. 11.7; de Vaux and Stéve 1950: Fig. 32.9; Smith 1973: Pl. 72.494; Thalmann 1978: Fig. 331; Rosser 1985: Fig. 15; Pringle 1986:

Fig. 50.66; Arnon 1999:227, Fig. 10; Avissar 1999:96; Papanikola-Bakirtzis 1999:161; Stern 1999:127, Figs. 1.10–14; Stern and Tatcher 2009: Fig. 3.26:12).

Color-Splash Glazed Bowls (Fig. 3:12–15).— These bowls appear to be the earliest glazed ceramic group that was influenced by the Chinese T'ang ware (Fehervari 1973:35). The body was white-slipped under a transparent glaze to provide a lighter background for the colored glaze that was splashed, mottled or painted with a brush. The most frequent colors are green and yellow splashes. The Yagur vessels were of either a light red or a dark red fabric, well-made and finely levigated. The bowl forms vary from classical hemispherical (Fig. 3:12) to carinated bodies (Fig. 3:13). This group is well-known throughout the Middle East beginning in the ninth century (Lane 1937: Fig. 2.D; Wilkinson 1973:54; Najjar 1989: Fig. 9.37; Northedge 1992: Fig. 160.2; Avissar 1996:78; Arnon 2008:115–116), and continues into the Crusader and Mamluk periods as well (Pringle 1985: Fig. 3.20; Avissar 1996:87; Stern 1997: Figs. 6.62; 6.63; Arnon 1999:227, Fig. 10.CE). These bowls are typical of the Mamluk period and have been recorded at Yoqne'am (Avissar 1996:96), Ḥorbat Shema' (Meyers, Krabel and Strange 1976:214–215), Meron (Meyers, Strange and Meyers 1981:124), Giv'at Yasaf (Stern 1999:132) and in Jordan (Brown 1991:233).

Polychrome Under-Glazed Slip-Painted Bowls (Fig. 3:16–18).— Bowls of this group can be considered one of the earliest and most popular styles in the Early Islamic repertoire. The bowls were white slipped and painted in green, manganese-black or purple-brown streaks, bows and daubs, under a transparent, monochrome, or color-splashed glaze. When the glaze is transparent, as in the Yagur examples, the background has a pale yellow or straw-like color. The fabric is always buff or pink, and when it is pink, the vessel was fired to a buff tone to provide a whitish background

to the colored decorations. Such vessels have been recorded from sites throughout the Middle East and are dated to the ninth–tenth centuries (de Vaux and Stéve 1950: Pl. XV.2–5; Frierman 1975: Fig. 6.o; Grabar, Holod and Knustad 1978: Fig. H-1; Whitehouse 1979: Pl. 1.a; Whitcomb 1989: Fig. 7.f; Arnon 1996: Fig. 34; 1999: Fig. 4; 2003:141; Avissar 1996: Fig. XIII.2.4; Yavor 1999: Fig. 32.4).

COOKING WARE

Unglazed Ware

Globular Cooking Pot (Fig. 4:1).— This unique cooking pot is similar to the unglazed Aegean specimens found in Corinth, Troia and Cyprus (Stillwell MacKay 1967: Fig. 4.117; Megaw 1972:334, Type B, Fig. E; Hayes 1995: Fig. 5:74) and dated to the late twelfth and thirteenth

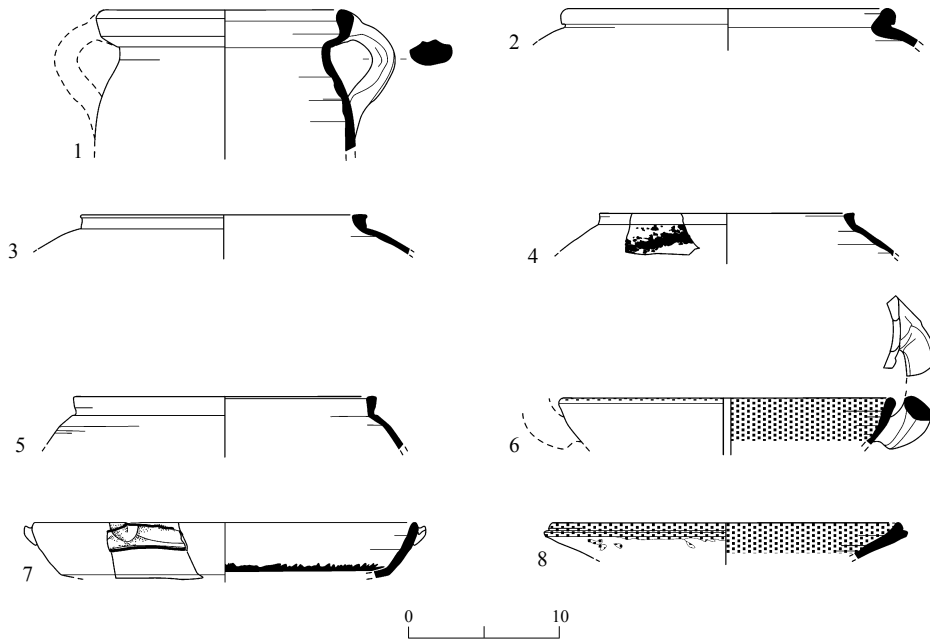


Fig. 4. Cooking ware: unglazed (1, 2) and glazed (3–8).

No.	Vessel	Locus	Basket	Description
1	Cooking pot	718	7042	Light red fabric 2.5YR 6/6, fired to pale red–gray tone 2.5YR 6/2; abundance of basalt and limestone pebbles
2	Cooking pot	808	8029	Dark red fabric 2.5YR 3/6; abundance of crushed shells, quartz, white grits and basalt; unevenly fired leaving thick gray core; burnished marks visible on outer surface; D rim 11.25 cm
3	Cooking pot	746	7085	Red fabric 10R 4/8, fine; abundance of white grits; D rim 9 cm
4	Cooking pot	718	7034	Red fabric 10R 4/8, fine; abundance of white grits; dark brown glazed band on outer surface below rim; D rim 7.5 cm
5	Cooking pot	602	6011	Red fabric 10R 4/8, fine; abundance of small white grits; D rim 11.25 cm
6	Frying pan	806	8024	Red fabric 10R 4/8, fine; abundance of small white grits; thick dark brown glaze applied to surface int.; D rim 12.5 cm
7	Frying pan	611	6020	Red fabric 10R 4/8, fine; abundance of small white grits; dark brown glaze applied on base int. only; D rim 13.75 cm
8	Bowl/frying pan	732	7061	Dark, reddish brown fabric 2.5YR 3/4, fine; well made; ginger-brown glaze applied on surface int.; D rim 13.75 cm

centuries. The vessel is characterized by a deep, concave rim that served as a lid holder. The fabric is unusual to cooking vessels in this region: light red, fired to pale red–gray, and containing many basalt and limestone pebbles.

Handmade Cooking Ware (Fig. 4:2).— All the vessels in this group were handmade, produced by coils and smoothed with a wet cloth. They are globular with a short, everted rim, triangular in section. The ware was coarsely levigated, containing large quantities of white grits in various sizes and an abundance of quartz due to sand inclusions. The vessels were unevenly fired, leaving a thick gray core. The single example from Yagur contains basalt inclusions, which negate a local origin for this pot. Handmade cooking vessels are well recorded in Mamluk occupation levels dated to the thirteenth–fourteenth centuries in Jerusalem (Tushingham et al. 1985: Fig. 45.16, 17), Yoqne‘am (Avisar 1996:138), Burj al-Aḥmar (Pringle 1986: Fig. 41), St. Mary of Carmel (Pringle 1984: Fig. 3.2–4), Tel Taninnim (Arnon 2006: Fig. 125:3), Caesarea (Arnon 2008:369), Ḥorbat ‘Uza (Stern and Tatcher 2009: Fig. 3.19:12) and Pella in Jordan (Smith 1973:242–243, Fig. 59.1024),

Glazed Ware

Globular Cooking Pots (Fig. 4:3–5).— During the tenth century, a new type of closed cooking vessel appeared, replacing the open casserole that was common throughout Late Antiquity, the Umayyad and Abbasid periods (Avisar 1996:133; Arnon 1999: Fig. 8j–e; Stacey 2004:124). It continued into the eleventh century (Arnon 2008:250, 301), and, with minute differences, into the twelfth–thirteenth centuries as well. The first glazed pots had a groove below the rim and were only glazed on the interior of the base. Such specimens were dated to the late ninth–early tenth centuries at Caesarea (Arnon 2008:218), Tiberias (Stacey 1995: Fig. 9:2), Yoqne‘am (Avisar 1996: Fig. XIII.89:2, Types 2, 4) and Amman (Northedge 1992: Fig. 137:7). Some of the pots were fired

to a light red tone in a reduced atmosphere, a technique quite common on storage jars during the Early Islamic period.

The later versions are more globular and usually have strap handles, often accompanied by thumb-indented ledge handles, and a slightly everted, ledged rim smeared with ginger-brown glaze on the entire inner surface. Similar cooking pots have been retrieved from Ḥammāt Gader (Boas 1997: Pl. I), Yoqne‘am (Avisar 1996:136–137), Caesarea (Pringle 1985: Fig. 2.3–8), Burj al-Aḥmar (Pringle 1986:48), Tel ‘Arqa (Thalmann 1978: Fig. 32) and Cyprus (Megaw 1972:334). Although dated to the twelfth century at Yoqne‘am (Avisar 1996: Type 8, Fig. XIII.95:1), Jerusalem (Tushingham et al. 1985: Fig. 34:35), Amman (Northedge 1992: Fig. 137:5, 3) and Tell ‘Arqa (Hakimian and Salamé Sarkis 1988: Fig. 11:5; Thalmann 1978: Fig. 32), similar cooking pots to those in Fig. 4:6, 7 were retrieved in a sealed chamber at Caesarea, along with approximately 200 glass, bronze and pottery items, known as the Fatimid Caesarea Hoard (Lester, Arnon and Pollak 1999: Fig. 1:d; Arnon 2003:238–239).

Frying Pans (Fig. 4:6, 7).— The wheel-made, glazed frying pans made their first appearance during the tenth century, as reported from Caesarea and Yoqne‘am (Avisar 1996:139, Types 13, 14; Arnon 1999: Fig. 226.a–h). This efficient cooking vessel is characterized by its flat base covered with thick brown glaze, an inverted rim or an everted rim triangular in section and strap handles. The Early Islamic frying pans are glazed only on the bottom (Fig. 4:7), while the later examples are glazed on the entire inner surface up to the rim. The later frying pans have been recorded at sites such as Yoqne‘am (Avisar 1996: Fig. XIII.102, Type 15), ‘Akko (Pringle 1997:139), Caesarea (Pringle 1985: Fig.3.9; Arnon 1999: Fig. 12d), St. Mary of Carmel (Pringle 1984: Fig. 5:25), Ḥammāt Gader (Boas 1997: Fig. I.14) and Tel ‘Arqa (Thalmann 1978: Fig. 31.5; Hakimian and Salamé Sarkis 1988: Fig. 11.1–4, Type D1.1.1).

Open Cooking Bowls or Frying Pans (Fig. 4:8).— This type of bowl (or frying pan) is characterized by beveled walls and a pinched, thickened rim. The fabric is dark reddish brown, resembling cooking ware. The entire inner surface is covered with a thick, ginger-brown lead glaze. Similar specimens were recovered at 'Atlit (Johns 1936: Fig. 14.5), St. Mary of Carmel (Pringle 1984:99, Fig. 5:29) and Yoqne'am (Avissar 1996:144, Type 18), and dated to the thirteenth–fourteenth centuries.

CONCLUSIONS

The pottery from Area B Strata III–I at Ḥorbat Yagur demonstrates that the excavated area was probably a dwelling quarter rather than a storage area, as there were no storage vessels. The assemblage dates between the ninth and fourteenth centuries CE; no material dates earlier than the second half of the ninth century. The relatively large number of Serçe Limani-type bowls raises the question of their origin, and petrographic analysis is therefore required.

REFERENCES

- Armstrong P. 1991. A Group of Byzantine Bowls from Skopelos. *OJA* 10:335–347.
- Arnon Y.D. 1996. *The International Commercial Activity of Caesarea during the Early Islamic II Period (~750–~960), according to the Ceramic Evidence*. M.A. thesis. University of Haifa. Haifa (Hebrew; English abstract).
- Arnon Y.D. 1999. The Islamic and Crusader Pottery of Area I 1993–1994. A Stratigraphical/Typological Study. In K.G. Holum, A. Raban and J. Patrich eds. *Caesarea Papers 2: Herod's Temple, the Provincial Governor's Praetorium and Granaries, the Later Harbor, a Gold Coin Hoard, and Other Studies* (JRA Supplementary Series 35). Portsmouth, R.I. Pp. 225–251.
- Arnon Y.D. 2003. *Development and Continuity in the Early Islamic Pottery Types from the 7th Century to the 12th Century C.E.: The Caesarea Data as a Study Case*. Ph.D. diss. University of Haifa. Haifa.
- Arnon Y.D. 2006. Tel Tanninim, the Late Periods. In R.R. Stieglitz ed. *Tel Tanninim, Excavations at Krokodeilon Polis 1996–1999*. Boston. Pp. 149–154.
- Arnon Y.D. 2008. *Caesarea Maritima: The Late Periods (700–1291)* (BAR Int. S. 1771). Oxford.
- Arnon Y.D. Forthcoming. Pottery and Oil Lamps of the Early Islamic Period. In E. Stern and D. Syon. *'Akko: The Excavations of 1991–1998: The Late Periods* (IAA Reports).
- Avissar M. 1996. The Medieval Pottery. In A. Ben-Tor, M. Avissar and Y. Portugali. *Yoqne'am I: The Later Periods* (Qedem Reports 3). Jerusalem. Pp. 75–262.
- Baramki D.C. 1944. The Pottery from Kh. el Mejjar. *QDAP* 10:65–105.
- Bass G.F. and van Doorninck F.H. Jr. 1978. An 11th Century Shipwreck at Serçe Limani, Turkey. *IJNA* 7:119–132.
- Ben-Tor A. 1963. Excavations at Ḥorbat 'Uza. *'Atiqot* (ES) 3:1–24.
- Boas A. 1997. Late Ceramic Typology. In Y. Hirschfeld ed. *The Roman Bath of Hammat Gader, Final Report*. Jerusalem. Pp. 382–395.
- Brown R.M. 1991. Ceramics from Kerak Plateau. In M. Miller ed. *Archeological Survey of Kerak Plateau*. Atlanta. Pp. 169–279.
- Fehervari G. 1973. *The Islamic Pottery, Barlow Collection*. London.
- Finkelstein J.C. 1997. The Islamic Pottery from Khirbet Abu Suwwana. *'Atiqot* 32:19*–34*.
- Frierman D. 1975. *Medieval Ceramics, VI–XIII Centuries*. Los Angeles.
- Grabar O., Holod R. and Knustad J. 1978. *City in the Desert: Qasar al Hayr East* (Harvard Middle Eastern Monographs 23–24). Cambridge, Mass.
- Hakimian S. and Salamé-Sarkis H. 1988. Céramique médiévales trouvées dans une Citerne à Tell 'Arqa. *Syria* 65:1–61.

- Hayes J.W. 1995. A Late Byzantine and Early Ottoman Assemblage from the Lower City of Troia. *Studia Troica* 5:197–210.
- Jenkins M. 1992. Early Medieval Islamic Pottery, the 11th Century, Reconsidered. *Muqarnas* 9:56–66.
- Johns C.M. 1936. Excavations at Pilgrim's Castle 'Atlit (1932–3), Stables at the South-West of the Suburbs. *QDAP* 5:31–74.
- Johns J., McQuitty A. and Falkner R. 1989. The Faris Project: Preliminary Report upon the 1986 and 1988 Seasons. *Levant* 21:63–69.
- Lane A. 1937. Medieval Finds at Al-Mina in North Syria. *Archaeologia* 87:19–78.
- Lester A., Arnon Y. and Pollak R. 1999. The Fatimid Hoard from Caesarea: A Preliminary Report. In M. Barrucand ed. *L'Egypte Fatimide art et son histoire*. Paris. Pp. 233–248.
- Mason R.B., Ronald M., Farquhar R.M. and Smith P.E. 1992. Lead Isotope Analysis of Islamic Glazes: An Exploratory Study. *Muqarnas* 9:67–71.
- Mcquitty A. and Falkner R. 1993. The Faris Project: Preliminary Report on the 1989, 1990 and 1991 Seasons. *Levant* 25:37–61.
- Megaw A.H. 1971. Excavations of Saranda Kolones Paphos. *RDAC* 1971:117–146.
- Megaw A.H. 1972. Supplementary Excavations on Castle Site at Paphos, Cyprus 1970–71. *DOP* 26:323–246.
- Meyers E.M., Krabel A.T. and Strange F. 1976. Ancient Synagogue Excavations at Kh. Shema, Upper Galilee, Israel 1970–72 (*ASOR* 42). Durham, NC.
- Meyers E.M., Strange J.F. and Meyers C.L. 1981. *Excavations at Ancient Meiron, Upper Galilee, Israel 1971–72, 1974–75, 1977*. Cambridge, Mass.
- Munsell Soil Color Charts* 1994. New York.
- Najjar M. 1989. Abbasid Pottery from El-Muwaqqar. *ADAJ* 33:305–322.
- Northedge A. 1992. *Studies on Roman and Islamic Amman I: History, Site and Architecture*. Oxford.
- Papanikola-Bakirtzis D. 1999. *Byzantine Glazed Ceramic, The Art of Sgraffito*. Athens.
- Pringle D. 1984. Thirteenth Century Pottery from the Monastery of St. Mary of Carmel. *Levant* 16: 91–111.
- Pringle D. 1985. Medieval Pottery from Caesarea: The Crusader Period. *Levant* 27:171–202.
- Pringle D. 1986. *The Red Tower (al Burj al-Aḥmar) Settlement in the Plain of Sharon at the Time of the Crusaders and Mamluks (A.D. 1099–1516)* (British School of Archaeology in Jerusalem, Monograph Series 1). London.
- Pringle D. 1997. Excavations in Acre 1974: The Pottery of the Crusader Period from Site D. *'Atiqot* 31:137–157.
- Riis P.J. and Poulsen V. 1957. *Hama 1931–1938 IV, 2: Le Verreies et Poteries Médiévales*. Copenhagen.
- Rosser J. 1985. Excavations at Saranda Kolones, Paphos, Cyprus, 1981–1983. *DOP* 39:81–95.
- Sa'id K. This volume. A Settlement from the Roman–Mamluk Periods at Ḥorbat Yağur.
- Salamé-Sarkis H. 1980. *Contribution à l'histoire de Tripoli et de sa région à l'époque des Croisades*. Paris.
- Smith R.H. 1973. *Pella in the Decapolis*. Wooster.
- Stacey D.A. 1995. *The Archaeology of Early Islamic Tiberias*. Ph.D. diss. University of London. London.
- Stacey D.A. 2004. *Excavations at Tiberias, 1973–1974: The Early Islamic Periods* (IAA Reports 21). Jerusalem.
- Stern E.J. 1997. The Pottery of the Crusader and Ottoman Periods. *'Atiqot* 31:35–71.
- Stern E.J. 1999. Pottery from Giv'at Yasaf. *'Atiqot* 37:125–136 (Hebrew; English summary, p. 174).
- Stern E.J. and Tatcher A. 2009. The Early Islamic, Crusader and Mamluk Pottery. In N. Getzov, D. Avshalom-Gorni, Y. Gorin-Rosen, E.J. Stern, D. Syon and A. Tatcher. *Ḥorbat 'Uza. The 1991 Excavations II: The Late Periods* (IAA Reports 42). Jerusalem. Pp. 118–197.
- Stillwell MacKay T. 1967. More Byzantine and Frankish Pottery from Corinth. *Hesperia* 36:35–71.
- Thalmann J.P. 1978. Tell Arqa (Liban Nord), Campagnes I–III (1972–1974). *Syria* 60:22–118.
- Tushingham A.D., Hayes J.W., Scott R.B.Y. and Hamrick E.W. 1985. *Excavations in Jerusalem 1961–1967 I*. Toronto.
- de Vaux R. and Stève A.M. 1950. *Fouilles à Qaryet el-'Enab, Abū Gôsh, Palestine*. Paris.
- Whitcomb D. 1988. Kirbet-al-Mafjar, Reconsidered Ceramic Evidence. *BASOR* 271:51–58.
- Whitcomb D. 1989. Coptic Glazed Ceramics from Excavation at Aqaba Jordan. *JARCE* 26:167–182.
- Whitehouse D. 1979. Islamic Glazed Pottery in Iraq and the Persian Gulf, the Ninth and Tenth Centuries. *Annali del Istituto Orientale di Napoli* 39 (N.S. 29):45–61.
- Wilkinson C.K. 1973. *Nishapur, Pottery of the Early Islamic Period*. Greenwich, Conn.
- Yavor Z. 1999. Haifa, Kh. Tinani. *HA-ESI* 109: 21*–22*.