

Water in Ancient Mediterranean Households

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Chapter 8 Reusing Stepped Pools in Roman Palestinian Households

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8 Reusing Stepped Pools in Roman Palestinian Households

Rick Bonnie

Introduction

For most ancient Mediterranean households, the lifecycle of their small-scale water installations is relatively straightforward: construction, primary use, and disuse. The depth and narrow shafts of many cisterns and wells make them ill-suited for any use other than water storage and supply. Some cisterns, in order to change their functionality, may show signs of physical alterations, while others simply became refuse pits. In some cases, wells may hold special deposits that are meant to mark different stages of their construction and disuse.¹

During the Late Hellenistic and Roman periods, however, a type of household water installation that was considerably less deep and, more importantly, easily accessible via a flight of steps emerged in the soft limestone bedrock of the Southern Levant. Most historians and archaeologists today claim that these so-called ‘stepped pools’ were primarily constructed and used for a ritual within Jewish households that is well described in contemporary and later textual sources: ritual purification bathing.² The easy access into these pools, however, also meant that after their initial use they may have served a variety of other purposes before finally being abandoned.

By studying the reconditioning of these stepped pools, from ritual to mundane, this chapter aims to improve the understanding of how these pools functioned within their respective households and what they meant for them. I do this through a detailed examination of the context and find deposits of pools from several case study sites, including Jerusalem, Jericho, and Sepphoris. As these stepped water features and their particular spread and identification form a rare occurrence in a broader Mediterranean household context, I will first delve deeper into these pools’ research history.

1 On special deposits in wells, see van Haasteren & Groot 2013. On cisterns, see Klingborg 2017, 53–54.

2 See, e.g., Berlin 2005; Adler 2011; Reich 2013. For a discussion of the literary sources on ritual purification, see Lawrence 2006; Miller 2015. For a historiographical overview on stepped pools, see Bonnie 2019b.

Stepped Pools as Jewish Ritual Purification Baths

Stepped pools share the general characteristics of cisterns, as waterproof containers that received an irregular inflow of rainwater, but with a distinctive flight of steps for easy access. The canonical type is a mid-sized rectangular pool (2–3 m in length, 1–2 m deep) that is hewn into the natural bedrock and coated with waterproof plaster, with a flight of steps spanning its full width (Figure 8.1). However, numerous deviations occur in terms of pool size, step construction, roof coverage, and plaster lining.³ Where excavations have revealed their context in detail, it appears that stepped pools were connected via conduits to a wider network of rainwater-fed installations within a household, such as adjacent basins⁴ and/or bell-shaped cisterns.⁵ Similar to cisterns, stepped pools have no clear water outlet at the bottom, so outflow seems to have occurred via drawing, evaporation, and either via overflow or via conduits placed at or near the top. The large majority of stepped pools

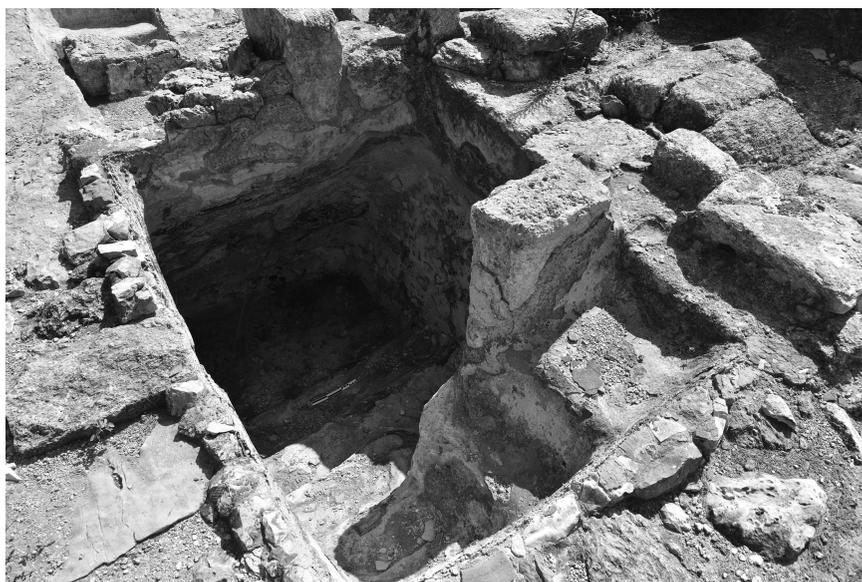


Figure 8.1 Sepphoris SP4, an example of stepped pool structure. Photo by author.

- 3 A regional attempt to subdivide the different categories of stepped pools has not been undertaken, but like cisterns this will likely not provide much further information on their chronology and functioning. See Klingborg 2017, 16–17, for a discussion of cistern typologies.
- 4 It has occasionally been suggested that such basins served as an *'otsar* installation, a water basin to regularly change the used water from a ritual bath. Adler (2014) has shown convincingly that *'otsar* installations are, in fact, an early modern innovation. They did not occur in antiquity.
- 5 However, not all stepped pools are rainwater fed. Some exposed in houses at Magdala, on the north-west shore of the Sea of Galilee, were fed by groundwater. See Reich & Zapata-Meza 2018. The stepped pools exposed in the Hasmonean palace at Jericho were fed by springwater via an aqueduct. See, e.g., Netzer 2001, 42.

are found in household contexts, while some have been identified near agricultural installations, synagogues, and burial sites.⁶ Within houses, there seems to be no clear standard as to where these pools are found—some are in open courtyards, some in a corner of larger rooms, while others are tucked away in smaller rooms.

Because of their similar characteristics, the first excavated stepped pools were identified as cisterns. However, in the 1960s, excavations at Masada, a Herodian palace and fortress in the Judean desert, formed the starting point for a new, ritual identification of these archaeological features. Since then, literally hundreds of stepped pools have been identified as ritual purification baths within household contexts in the Southern Levant, notably in the Jerusalem region (Figure 8.2).⁷

The precise name for this type of installation in scholarly discussions remains ambiguous. Some scholars favour *mikveh*, a term appearing only in late antique rabbinic sources from the third century AD onwards that is in use up to today.⁸ However, as almost all the stepped pools predate these rabbinic sources, other scholars view this term as an anachronism that should be avoided.⁹

While being identified as ritual almost 60 years ago, little is known about the role and relevance of stepped pools in Jewish households during the Late Hellenistic and Early Roman periods based on the archaeological evidence at hand. Discussions often focus primarily on the general presence of these features in houses from these periods.¹⁰ The result is that detailed information about the stepped pools' construction, their working, dating, fill layers, and material deposits remains largely undiscussed. Yet, without this information, answers regarding the exact spatial distribution of these pools, the motivation and efforts of construction, the different sensorial experiences different pools provided,¹¹ and the motivation for abandoning these features can only be hinted at.¹²

Naming Conventions, Functioning, and Reuse Practices

Scholars, including myself, who have touched on the latter aspect—that is, why households abandoned the original function of stepped pools around the second century AD—have generally attempted to answer this by pointing to broader historical phenomena. This includes the ending of the Temple cult in Jerusalem,¹³ a changing understanding of Pentateuchal Laws,¹⁴ changing urban developments like

6 Zissu & Amit 2008.

7 A precise number cannot be given, as the criteria used to classify a 'Jewish ritual bath' as an archaeological feature differs among scholars. For example, Reich (2013) lists 459 pools as ritual baths, while Adler (2011) identifies 850 features as such.

8 See, e.g., Netzer 1991; 2004; Meyers & Gordon 2018. On the term *mikveh*, see Bonnie 2019b.

9 Galor 2007, 201–202; Steen Fatkin 2019, 157–160.

10 See notably Adler 2018; Steen Fatkin 2019; Gordon 2020.

11 For some inroads into this discussion, see Bonnie 2021.

12 See Miller 2015; Adler 2017; Bonnie 2019a.

13 Reich 2013.

14 Adler 2017.

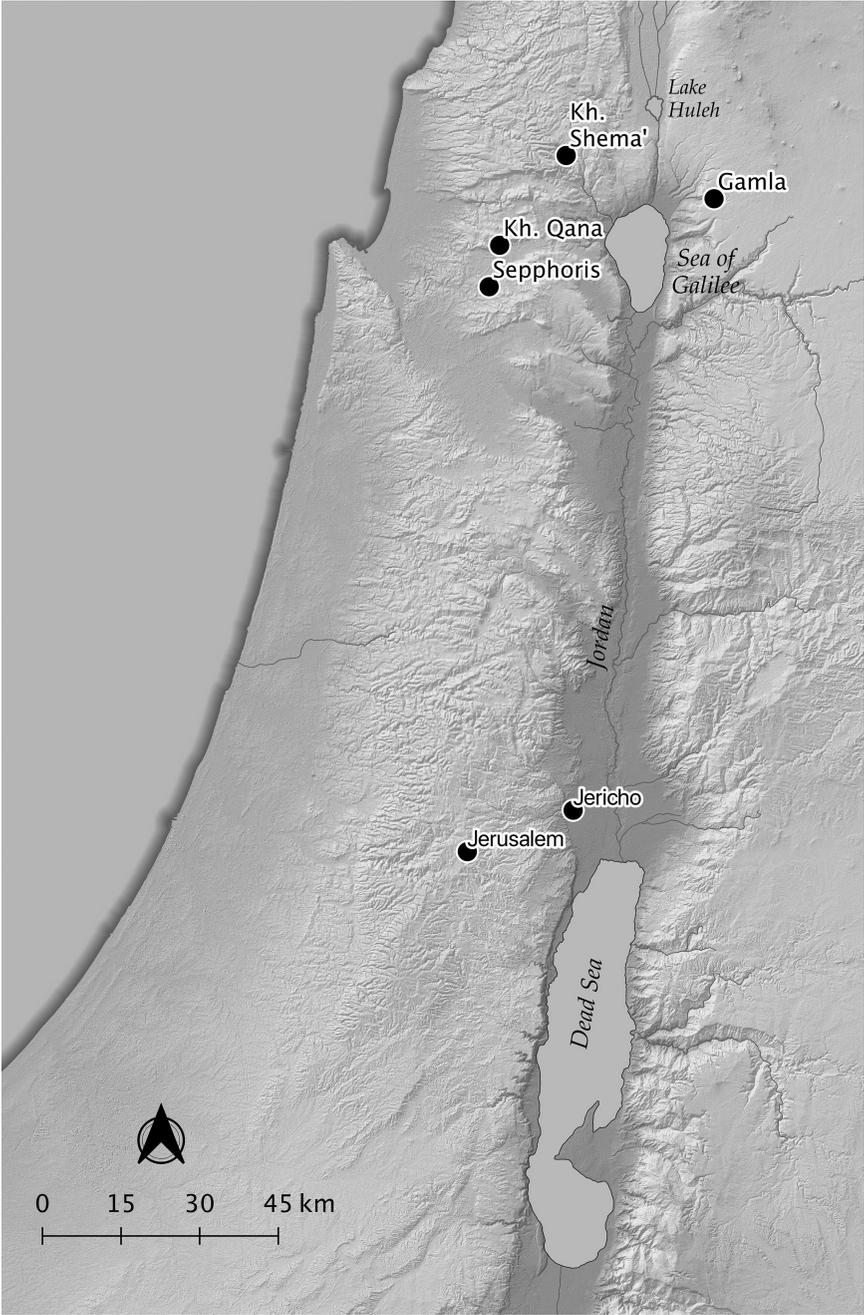


Figure 8.2 Map of the region with sites mentioned in the text. Map by author.

the introduction of aqueducts and bathhouses,¹⁵ or warming climatic conditions and temporal rainfall fluctuations during the Late Hellenistic and Roman periods.¹⁶

However, by reducing explanations to broader general phenomena we have overlooked what happens *on the ground* with individual pools in terms of construction, use, reuse, and abandonment practices and associated household experiences. For this chapter, I aim to study the reuse practices of individual stepped pools. I am particularly interested in the duration of ritual functioning within its household setting and evidence for reuse.

That stepped pools functioned first and foremost as ritual purification baths within Jewish houses and communities is considered almost a given among those working on the history and archaeology of Roman Palestine. But do such naming conventions come close to the actual experience of those having used them? Stuart Miller has shown that in the rabbinic literature mikva'ot could have been used not just for ritual purification.¹⁷ They could be used for many other household activities for which water was needed. That in much of the scholarly literature 'ritual bath' and mikveh have become synonymous with 'stepped pool' is a problem. It presumes a primary functioning that, following Miller, is not supported by contemporary or later textual evidence. For any given stepped pool found through excavation, it remains unclear whether ritual purification was an intended leading or supporting function, or whether it functioned as such at all.

Moreover, the period of functioning that is chosen for such naming conventions is equally subjective. In the life history of an object or structure—from production, use, (reuse/s), and abandonment—it is often an original function, as intended by its builders, that is seen by scholars as being more authentic. However, as Yannis Hamilakis has pointed out, the life stage of an archaeological object or structure that we, as scholars, emphasize 'is not unrelated to their position within national imagination, as well as Western imaginary as a whole'.¹⁸ There is little doubt that the way scholarship on the archaeology and history of Roman Palestine since the mid-1960s has described, discussed, preserved, and remembered stepped pools as Jewish ritual purification baths is shaped by modern socio-historical developments, even if the identification were to be historically correct.

In general, the excavation, conservation, and reconstruction of cultural heritage is fraught with modern cultural and political baggage and results in a highly selective remembering.¹⁹ While visually rather concealed and mundane, stepped pools have, due to their identification as ritual purification baths, gradually been granted monumental status in our modern understanding, remembering, and visualizing of a

15 Bonnie 2019a, 303–304; Gordon 2020.

16 Bonnie 2016; 2019b; Aarnio 2021.

17 Miller 2007; 2015.

18 Hamilakis 2013, 123.

19 See, e.g., Lucas 2001; El-Haj 2002; Bauman 2004; Egoz & Merhav 2009; Bonnie 2011; Effros & Lai 2018; Greenberg & Hamilakis 2022.

Jewish household under Roman rule. They are highlighted in press releases and research publications,²⁰ given special consideration in site reconstructions through site visitor routes and interpretive signage,²¹ and sometimes even reconstructed to be used in modern times.²²

The post-purification history of these pools within houses is in most cases unnoticed and left unmentioned. Yet, as we shall see through the examples provided, the end of purported ritual purification does not necessarily mean the end of the stepped pool. These material features ‘continue[d] to exist and evolve within the lived world, and continue[d] to be acted on.’²³

Examples of Reuse Practices of Stepped Pools in Jewish Houses

In Jerusalem’s Jewish Quarter, several houses with stepped pools show indications of reuse. One of the most notable examples is a house with a stepped pool, of which only the lower parts have been preserved, dating to the late second or early first century BC.²⁴ Inside the pool area, a mid-first-century BC fill layer at floor level

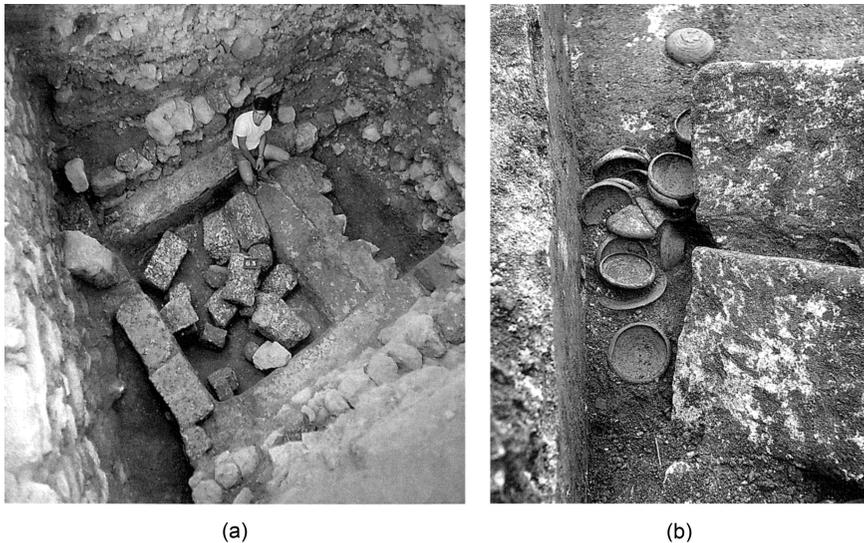


Figure 8.3 Jerusalem, stepped pool ‘miqweh 65’: (a) looking northwest, showing the ashlar collapse inside the pool; (b) Concentration of pottery bowls trapped under ashlar collapse, looking north. Reich 2000, Photos 2.77–78, courtesy of the Israel Exploration Society.

20 For news releases, see, e.g., Goldman 2015; Sci News 2020.

21 E.g., IMFA 2017.

22 See Lawent & Miskin 2013.

23 Marsh & Jones 2014, 170.

24 Reich 2000, 88–90. See also Avigad 1983, 74 and Figs. 45–46.

was exposed with a vast amount of complete and restorable ceramic tableware crushed below several fallen ashlar (Figure 8.3).²⁵ The large number of bowls and dishes, which at the time of the pool's collapse seem to have been stacked upon one another, point to the pool's later functioning as a storage room or space within the house.²⁶

The type of tableware is reminiscent of deposits found elsewhere in the region. At the site of Khirbet Qumran, in the Judean Desert, a large ceramic assemblage of over 1,000 complete and restorable bowls and cups, as well as some storage jars, dating to the first century BC, were found in a room adjacent to a larger communal hall. The bowls and cups were found neatly stacked upon one another per type. This room has commonly been identified as a kind of pantry, or provision room.²⁷

At the site of Jericho, to the east of Jerusalem and at the southern end of the Jordan Valley, excavations of the Hasmonean winter palace exposed multiple stepped pools. In one small room with a stepped pool and an adjacent, connecting pool, around 1,000 complete plates and bowls from the first century BC were found

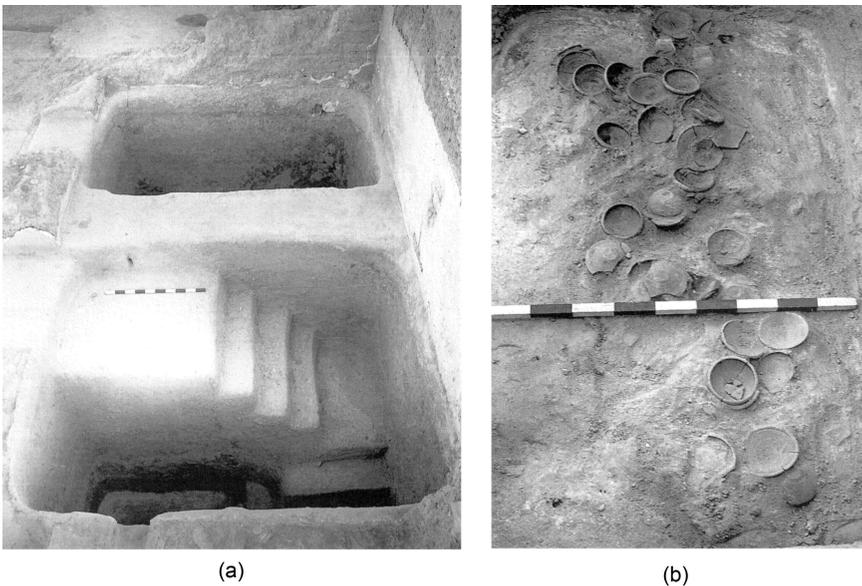


Figure 8.4 Jericho, stepped pool area ‘A(A)209-A(A)243’: (a) overview of area, looking north; (b) plates exposed in the connecting pool A(A)243, looking east. Netzer 2001, Ills 55 and 61, courtesy of the Israel Exploration Society.

25 Reich 2000, 89. These ashlar may have been part of a collapsed barrel-vaulted roofing.

26 In the near vicinity of this installation (c. 5–10 m away), two groups of bowls similar to those stacked inside the stepped pool, though in lesser numbers, were found in debris fills. See Reich 2000, 89–90.

27 For discussion, see Magness 2002, 53–57; Hachlili 2016, 220–230, with further references.

stacked upon one another in a 40–50 cm deep silt layer at the connecting pool's bottom. The deposit also included some ten complete cooking pots (Figure 8.4).²⁸

The large number of complete, similar-type ceramics found in the stepped pool examples from the house in Jerusalem and the palace at Jericho suggest that these pools were being repurposed for storage. Indeed, evidence of complete table, cooking, and/or storage wares in stepped pool deposits around Palestine are probably the most common indicator of their reuse. Several other well-recorded cases can be put forward. For example, not far from Jericho's Hasmonean palace area itself, a particularly rich deposit in the so-called 'Cornucopia Miqveh', including both intact and restorable ceramic vessels, an alabaster mortar, and other rare types of objects, hints at its later use for storage.²⁹

At the site of Gamla, in the Golan Heights, the fill deposit inside a deep oval-shaped stepped pool in its so-called 'Hasmonean Quarter' shows evidence of reuse as storage (Figure 8.5). The pool was part of a first-century BC, presumably public,



Figure 8.5 Gamla, stepped pool '1293', looking east, with broken storage jars at the bottom. Photo Danny Syon/Gamla Excavations.

28 Netzer 1982, 108, 110; 2001, 42–43. See also Bar-Nathan 2006, 266–272.

29 See Netzer 1982, 113; 2001, 117–123, notably 123. This pool is also known as 'Ritual Bath A(B)64.' For other stepped pools with evidence of intact ceramic vessels on the bottom, see Netzer 2001, 109 (Room A(B)9), 131 (Pool A(B)63), 161 (Ritual Bath AE45), 215 (Ritual Bath A(L)350-A(L)283).

bathing area.³⁰ No more than two to three generations after construction, changes were made to this bathing area, modifying it into a private household context. The changes included the raising of the area's floor level. This meant that three steps had to be added to the stepped oval pool, indicating that it was still in use at the time. However, this time it appears to have been used as a cool-storage room by its household, as evidenced by the five complete storage jars and three cooking pots found at the pool's bottom. As the excavators note, this was 'an ideal place to store perishable good[s], especially during the hot and dry summer months.'³¹

Towards the west from Gamla, in the region of Galilee, various excavations, such as at Khirbet Qana and Khirbet Shema⁴, have exposed ceramic evidence suggesting the repurposing of stepped pools in homes as household storage areas.³² At Sepphoris, a larger Roman town in that region, many excavated houses show evidence of one or multiple stepped pools, which according to the excavators were used for ritual purification. However, many of these pools show evidence of modification in function. In one presumed domestic context found below the early third-century AD House of Dionysos, accumulation deposits from a stepped pool show evidence of cooking vessels, rouletted cups, and storage jars attributable to the period from the first century to the first half of the second century AD. This assemblage suggests that in the later stages of its life, the residents of this house probably converted the stepped pool into a storage room or area.³³

The discovery of complete and restorable ceramic assemblages, whether table, storage, or cooking wares, on stepped pool floor levels has raised some discussion among archaeologists and historians regarding the manner in which these deposits were formed. This has mostly been discussed in relation to the ceramic assemblages found in stepped pool area 'A(A)209-A(A)243' in the Hasmonean winter palace at Jericho, which are associated with a silt layer (see Figure 8.4). As such, it has been suggested that these plates and bowls sank to the bottom at a time when the pool still held water and functioned as a ritual bath.

The reason for using ceramics near these pools—and eventually, accidentally, dropping them—remains unclear. Ceramic vessels would not have required ritual immersion, at least not according to known textual sources.³⁴ Furthermore, while storage and cooking vessels could have been used to take water from the pool for use elsewhere, those types are not found in significant quantity in these pools. Instead, the many bowls and plates found in the silt deposits are rather impractical for water carrying.

30 Berlin 2006, 80–83; see also Amit 2010, which places the stepped pool originally in a household setting.

31 Goren 2010, 139. However, see also Berlin 2006, 80: '[s]ince it is clear that neither of these areas [i.e., the stepped pool itself and the entrance into the room, the two areas where a large number of complete vessels were found] was built for storage, some if not all of these vessels must have been tossed here, perhaps when residents abandoned [the area].'

32 For Khirbet Qana, see Edwards 2002, 114–115. For Khirbet Shema⁴, see Meyers *et al.* 1976, 40–41, 58 and 113–117.

33 Balouka 2004, 35–39.

34 Miller 2015, 51–52.

The excavator of Jericho, Ehud Netzer, has suggested that these plates and bowls had so little value that users would not bother to retrieve them.³⁵ However, would this imply then that other objects, of more value, were retrieved from the pools when accidentally dropped? At the least, Netzer's explanation raises the question of why only certain ceramic assemblages are attested in this particular silt layer. The historian Stuart Miller has suggested that the ceramics may have been deposited after the pool was no longer used for ritual immersion, but 'was *still* functioning for rinsing/immersing dishes'.³⁶ This would explain their occurrence within the pool's silt layer, but again does not consider the particularity of this ceramic assemblage, as one would expect other ceramic vessels and other objects to be rinsed there as well.

One alternative in the case of the so-called 'Palace Miqveh' could be that the pool served as a storage area, but when this function was also discontinued, unregulated water flow filled the pool again for a considerable time. Water installations like cisterns and stepped pools were generally cleaned annually. The considerable quantity of ceramics found in the 'Palace Miqveh'—around a thousand individual items—and the exceptional thickness of its silt layer suggests that water ran through the pool for a considerably longer time than one year, which probably occurred only after its primary functioning ceased.³⁷ Another possibility, more speculative, is that the ceramic assemblage was stacked in the room upon planks or shelves above the pools themselves. The room could have been made accessible via a non-permanent flooring of perishable material, perhaps wooden beams or planks, covering the pools.³⁸ In that case, the water installations would only have been used infrequently.

More research on how the ceramic deposits inside the stepped pools were formed is needed, but this goes beyond the purpose of this chapter. However, it is noteworthy that a rather uniform ceramic assemblage of table, cooking, and/or storage wares, either complete or restorable, is attested at the bottom of stepped pools at different Late Hellenistic to Early Roman sites across a wider area. This observation, I would argue, indicates that most, if not all, of these pools had reuse activities going on at some point in time. Sometimes, as in the first-mentioned examples from Jerusalem and Jericho, the quantity of ceramic material suggests that the pool area was used by household residents to store the ceramics themselves. In other cases, notably when complete storage vessels are retrieved, household

35 Netzer 2001, 43.

36 Miller 2015, 51–52 n. 19, emphasis in original.

37 In this context, it should be noted that the water installations in Jericho's Hasmonean palace received water from a perennial spring through an aqueduct and channelling system. See Netzer 1982, 108; 2001, 42; Garbrecht & Netzer 1991. Hence, pools that previously held water, when not maintained properly could have filled up again.

38 For example, during the same excavations at Jericho, in a cross-section of the fill layers inside stepped pool A(E)529 'five charred beams about 50 cm apart in a 'V' formation' were visible. See Netzer 2001, 153. Netzer interpreted this as a roof collapse due to conflagration, but alternatively this could have been part of a pool cover or wall shelving. On the use of wooden beams to cover cisterns, notably attested at Delos, see also Klingborg 2017, 28, and in this volume.

residents used the area to store foodstuffs. To be sure, alternative uses that are less recognizable in the archaeological record remain possible as well.

While ceramic deposits can be indicative of reuse activities within stepped pools, there are other sources of evidence indicating that occupants decided on dispensing with a stepped pool's water-related ritual function in favour of a perhaps more mundane usage. At Sepphoris again, in a mid- to late-first-century AD housing unit labelled 'Unit Ib', stepped pool SP1 appears to have been converted into a space related to food preparation and/or the production of weaving equipment.³⁹ This is indicated by evidence of a mortared installation on its floor level (Figure 8.6), a grinding slab fragment, a cache of 80 bone spatulas, likely intended as weaving equipment, in various stages of production, as well as large fragments of, and nearly complete, vessels in the pool's lower accumulation layers.⁴⁰ Subsequent accumulation layers and associated finds suggest that the pool area as a whole went out of use not long after the house had been constructed.⁴¹ Another example comes from a nearby housing unit (IVc) where the final steps of a large, plastered stepped pool (SP8) were levelled through filling and a new larger, plastered



Figure 8.6 Sepphoris, stepped pool SP1 / L85.3228, looking north, with the later installation mortared on its floor. Gordon 2018a, Photo 4.25, courtesy of Eric and Carol Meyers/Duke Sepphoris Excavation Project.

39 Gordon 2018a, 67.

40 For the ceramics and installation, see Gordon 2018a, 91–93 as well as Photos 4.24 and 4.25. For the bone spatulas, see Burrus 2018, 806 and Fig. 30.1; Gordon 2018a, 94; Grantham 2018, 885–886. For the ground stone material, see Ebeling 2018, nos. 2 and 44. For the pottery, see Balouka 2013, Pls. 5:12, 7:4, 8:3, 8:10, 9:14, 9:24, 10:7, 11:21, 12:10, 12:15.

41 Gordon 2018a, 93–94.

surface area was created.⁴² While no clear ceramic deposits related to this pool have been documented, it is quite possible that it was converted into storage space. This interpretation may be supported by the fact that recent geochemical analysis of a floor plaster sample from this stepped pool measured higher-than-average strontium values.⁴³ High strontium values are associated to human settlement activities and could be linked to, for example, meat storage and preparation, though it equally might be associated with human excreta.⁴⁴

In one instance, excavations have shown a rather unique way of repurposing a stepped pool—for glass workshop refuse. Recorded during Jerusalem’s Jewish Quarter excavations, this stepped pool formed part of a house originally labelled ‘Herodian Residence’, which was in use roughly from the late second to late first century BC.⁴⁵ On the pool’s bottom, a grey silt layer that included several complete ceramic vessels was recorded. Above this, a *c.* 70 cm thick brown-greyish layer with organic material, charcoal fragments, many coins (mostly Hasmonean), and most importantly a large number of glass refuse fragments, which appear to have been intentionally dumped into the pool, was documented.⁴⁶

The glass assemblage, dated to the mid-first century BC or slightly earlier, contains hundreds of heavily weathered items: blown bottles, applicators or stirring rods, small objects, mould-made bowls, raw material, and production waste.⁴⁷ Yael Israeli and Natalya Katsnelson have argued, based on the presence of complete small objects in the assemblage, that the workshop from which the glass derived was no longer in use at the time of the deposit.⁴⁸ Consequently, it suggests that sometime around the mid-first century BC, the stepped pool was purposefully used to deposit a pre-existing assemblage of glass refuse.⁴⁹

The Pools’ Changing Function

The question of why stepped pools were given a new function within their household is highly context specific. It could be related to changes in, or issues with, the water supply. As the pools were fed by rainwater harvesting, small planning and construction errors may have influenced the proper water flow into the pools and led to unintended water levels. Equally, any building developments in its immediate surroundings, an adjacent new house, or a new floor level, may have altered previous water flow dynamics. As pools, cisterns, and wells require regular upkeep and repairs, their complexities and costs may also have led to the disuse of the pool.

42 Gordon 2018b, 201–202.

43 Bonnie *et al.*, forthcoming. Two other sampled stepped pools at Sepphoris show equally higher-than-average strontium values.

44 Wilson *et al.* 2008; Vyncke *et al.* 2011.

45 Avigad 1983, 84–95.

46 Israeli & Katsnelson 2006, 411.

47 Israeli & Katsnelson 2006, 412–413.

48 Israeli & Katsnelson 2006, 430.

49 Noteworthy is that the original excavator considered the second half of the first century BC, the period when the glass refuse was dumped into the stepped pool, as the flourishing period for the house. See Avigad 1983, 85.

However, houses and their integrated structures could simply have changed owners, or the needs of a household may have shifted for various reasons.

The most common reuse phenomenon illustrated by the examples provided is that of a conversion into a dry storage space, primarily attested by the number of complete or restorable ceramic vessels in these pools. For grain to be properly preserved, storage spaces required stable temperatures (preferably 15–30°C) and humidity levels (15% moisture or less).⁵⁰ This would hold for other dried foodstuffs such as legumes as well, even though the latter are easier to store.⁵¹ For storing wine and olive oil, spaces likewise had to be of relatively modest temperatures, preferably 13–20°C.⁵² When warmer, there is the danger that the wine would turn into vinegar and the oil would become rancid. However, too low temperatures would be equally problematic but were likely a lesser problem in the relatively warm southern Levantine environment.

This understanding of ideal storage conditions was known and applied throughout antiquity.⁵³ Yet, not all spaces in a house were effective or ideal as storage spaces. Underground spaces like stepped pools, when sitting empty, provided optimal conditions in terms of stable temperatures within most households. Furthermore, the waterproof plaster with which they were coated was not only able to retain water in a pool or basin area, but if the pool area itself was empty, it also formed a barrier for any moisture coming from the surface upwards and provided a means to control the humidity of the space and minimize dampening.⁵⁴

The reason why certain stepped pools were turned into dry and cool storage spaces is likely related to what Astrid Van Oyen has called people's 'anticipation of a future and its needs.'⁵⁵ Making sure of an adequate supply and storage of both water and food are activities to reduce the risks of an uncertain future.⁵⁶ It is possible that, for one reason or another, a household understood that the future food supply was uncertain, and its storage had a higher priority than maintaining a water storage facility for purported ritual use.

Most households still had larger bell-shaped cisterns that would have gathered an adequate amount of rainwater for drinking, cooking, and cleaning. The stepped pools within a home, which relative to the cisterns are rather small in size, played no essential role in this respect, even if, as Miller has pointed out (see above), they could have been used for such mundane purposes as well.⁵⁷ Furthermore, paleo-climatic studies have shown that the Late Hellenistic to Early Roman period, when stepped pools were constructed and used, was a rainy and wet period in the region when compared to the periods before and after.⁵⁸ The availability of an ample supply of *and* storage

50 Van Oyen 2020, 41; Cheung 2021, 64–68.

51 Flint-Hamilton 1999.

52 Cheung 2021, 69.

53 Cheung 2021, 64–66; Van Oyen 2020, 39–53.

54 Cheung 2021, 65.

55 Van Oyen 2020, 13.

56 See Klingborg 2017 on risk and water consumption, and Van Oyen 2020 for risk in terms of storage in antiquity in general.

57 Miller 2007; 2015.

58 For discussion, see Bonnie 2017, 32–33; Aarnio 2021, 15–16; Bonnie 2021.

facility for water, together with the anticipation of a future need for a secure food supply, may have led certain households to repurpose their stepped pool facilities.

What then precipitated this anticipated future need remains highly context specific. While it could be related to crop failures, the relatively good rainfall conditions in the region, as suggested by paleo-climatic studies, generally argue against this. Nonetheless, on a household level, it could still be a possibility. Another reason is that food supplies were cut short due to wars or unrest. We know from historical records that the Hasmonean and Herodian periods in the region during the first centuries BC and AD were times of socio-political unrest and changes in power, which culminated in the First Jewish Revolt (AD 66–70) and the Bar Kokhba Revolt (AD 132–135).⁵⁹ This unrest likely was felt across different parts of society and as such may have led individual households to decide on increasing certain means of supply.

The Duration of Original Use

The examples of household stepped pools discussed in this chapter show not only that such installations were being reused, they also bring up another aspect of pool use that has not been given much notice in the scholarly literature. That is, many of the examples had a relatively short original use phase, when they were allegedly used for ritual purification, usually no longer than one to three generations (25–75 years).

Generally, scholars view stepped pools as part of the common Jewish household repertoire during the first century BC and first century AD. Such views can give the impression, even if not deliberate, that *all* pools functioned roughly contemporaneously. The fact that the construction and abandonment of stepped pools, due to most being hewn out of bedrock, remains difficult to date accurately does not help with this impression.⁶⁰ Furthermore, the fact that the most-used dataset of stepped pools dates the lifespan of these pools according to general periodizations like ‘Early Roman’ or ‘Byzantine’ does not help here either.⁶¹ The impression that all pools were in use simultaneously, however, is false. Many of the stepped pools generally dated to the Early Roman period were allegedly used as ritual baths at different points in time with each having a different time span.

To this should be added that the excavated deposits indicating a change of function, whether a deposit of glass refuse or storage vessels, are only indicative of the latest time the pool was used for that purpose. We do not have any indication of how long these pools had been in secondary use by that time. To put it differently, the deposit provides only a *terminus ante quem* for its reuse.

On one end of the spectrum, this reuse deposit could have been the first and only time, and as such gives a date for the change of function as provided by excavators. However, the deposit that was excavated could simply have been left after years of using the stepped pool for food storage or refuse purposes. On the other end of the

59 See Goodman 1987; Keddie 2019.

60 On the issues of dating stepped pools, see Bonnie 2019a, 291–292. On dating cisterns, which have similar issues, see Klingborg 2017, 52–56.

61 See Adler 2011, 319–343.

spectrum, given that the time between the pool's construction and the suggested deposit of reuse activity is relatively short—decades not centuries—it remains possible that some stepped installations we call 'pools' may have never been used for collecting water for ritual purification but instead may have been built from the outset for other purposes.

As such, evidence for stepped pools in two neighbouring households, for instance, does not mean much in itself without understanding whether the houses in fact functioned at the same time. Equally, general distribution maps are of little help in understanding the significance of these stepped pools within their respective homes and communities,⁶² as it remains unclear from them whether all pools were in ritual use at the same time and for what reasons. I instead argue that such generalizations obfuscate the precise social significance and functioning of these archaeological features. They are of little use for understanding the on-the-ground significance of the installations for their respective households, and as such to Jewish society at large.

Conclusion

This chapter explored the ubiquitous stepped pools found in houses across Roman Palestine from the perspective of their life histories. In particular, I have looked through various examples into the evidence available to us to increase our understanding of how and why such stepped pools were given new functions. The conscious act of abandoning a pool's original purported ritual use in order to use it for other, more mundane purposes is a significant but nonetheless warranted event. I have shown through numerous well-documented examples that stepped pools' functionality within homes did in fact change and quite frequently did so after a relatively short period of purported ritual use.

What does a change in function of stepped pools tell us about the underlying choices and intentions of the Jewish residents in whose homes these features have been attested? This study has highlighted that there is no apparent single manner in which or reason why their original ritual function may have been changed. Some pools were repurposed as part of an industrial complex for glass waste, some were turned into storage rooms in a house context, others again were given a function related to food production and/or weaving. The nature and variety of functions given to these stepped pools after the end of their purported ritual use is of course to be expected for diverse communities and households, even if many or all would have self-identified as Jewish.

If we take this point of diversity seriously, this also teaches us something regarding the pools' earlier purported ritual functioning. As there is no single way in which these stepped pools were being reused by different Jewish households, it is possible to assume that there is also no single original function of stepped pools.⁶³ Not all stepped pools found in excavations by necessity were intended to

62 For a similar critique, see also Bonnie 2021, 239–240.

63 This point supports Miller's argument of the non-monolithic mikveh. See Miller 2007; 2015. For discussion, see above, section 'Naming Conventions, Functioning, and Reuse Practices'.

be used for ritual purification bathing. More importantly, those pools for which the evidence suggests a change in function could, if one had so wished, still continued to have been used for ritual purification. This sounds obvious, but it is an important point to stress. Those households who gave these pools a new function ascribed new socio-cultural meanings and values to these structures. They may no longer have needed or wanted a ritual purification bath.

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