

Figure 12. A Mamluk/Ottoman-period vessel from Stratum II (L15, Reg. no. 30).

of a pipe maker's by-product (Robinson 1983: 273). This type of pipe can be dated to the late 18<sup>th</sup> century.

*Fig. 11:3* ☒ Fragmentary bowl; the upper part of the bowl and the shank are missing. The bowl is large and round. It is decorated with a vertical rouletted net pattern. This roulette is set between undecorated panels, which gives the bowl the appearance of a flower with closed petals. The broken upper part would have been straight and undecorated, as can be inferred from preserved examples found in Jaffa, in excavations at the old police station<sup>2</sup>. As in Fig. 11:2, the broken shank here would have been short, with an upturned end forming a thickened and ringed wreath. This pipe is made of pink clay, burnished on the exterior and bearing splashes of dark yellow glaze.

*Fig. 11:4* ☒ This large, heavy pipe is almost completely preserved except for parts of the bowl. The latter is large and round, and is decorated with stamped petaled flowers. Opposite the shank there is a rosette in sharp relief. The shank is short (4cm) and upturned, and ends in a thickened wreath decorated with incised lines. With an opening diameter of 1.4cm, the shank continues under the bowl and forms a flat-standing keel which is also decorated with incised oblong lines and two lines separating the shank from the keel. The pipe is made of light brownish clay, slipped purplish red and additionally burnished. Pipes of the same type have been found in Jaffa, although their decorations are less elaborate (Jaffa Type J-180). They also incorporate the protruding rosette and the same flat keel. A pipe with a similarly decorated keel has also been found in Banias (Dekkel 2008: Fig. 4.10:58). This type of pipe can be dated to the late 18<sup>th</sup> century.

#### ***Ottoman/Mamluk Vessel***

This vessel (Fig. 12) was designed to look like a spinning and weaving bowl, wherein yarn was threaded

through holes in the base. The vessel dates to the Mamluk or Ottoman period (Ayala Lester, pers. comm.).<sup>3</sup>

## **Early Bronze Age finds**

### ***Conn Herriott***

#### ***Ceramics***

These included holemouth jar fragments, ledge handles, a juglet and a large number of diagnostic and non-indicative body sherds. However, all were subsequently lost except one pithos (Fig. 13). This appears to have been an EB I type. Its plastic rope decoration on the shoulder and lower body has parallels on storage vessels dating to throughout the EB period, e.g. Tel Halif (Alon and Yekutieli 1995: 159, Fig. 15) and Lachish (Gophna and Blockman 2004: 877, Fig. 15.2:9-10). But the simple everted rim and neck are best paralleled by EB I types, such as one from Tel Halif which has been dated to late EB Ib (Alon and Yekutieli 1995: 159, Fig. 15:1) and others from Yiftah'el (Braun 1997: 82, Fig. 9.20:1). The crossing incisions on the neck exterior have no clear meaning. Perhaps this was the potter/owner/merchant's personal mark. Such marks were typically made near the rim (Amiran *et al.* 1973: 194).

#### ***Sickle blade segments (n=5)***

These sickle fragments and segments have been identified largely on the basis of gloss. Of course, gloss is not the exclusive preserve of sickles. Studies have shown that a similar lustrous effect can be produced on flint tools by cutting canes, reeds, woodworking, and perhaps even by hoeing and digging (Rosen 1997: 55, referring to Curwen 1930, 1935; Neuville 1934-5; Anderson 1980 and Unger-Hamilton 1984, 1991).<sup>4</sup> Therefore microscopic analysis of these tools would be required to conclusively establish their identification

<sup>2</sup> The report of these excavations awaits publication and includes an large assemblage of clay smoking pipes from the 17<sup>th</sup>-20<sup>th</sup> centuries.

<sup>3</sup> This identification was made on the basis of photographs and drawings only, so should be treated with some caution.

<sup>4</sup> Presumably the other activities which produced gloss were no longer carried out or, with the increased availability of metal, more efficient tools were developed for those activities. Flint sickles were exceptional in that they were not replaced with copper or bronze versions, partly because flint is superior to copper as a sickle material and is at least the equal of bronze (Coles 1973: 34-39, Steensberg 1943: 11-26).

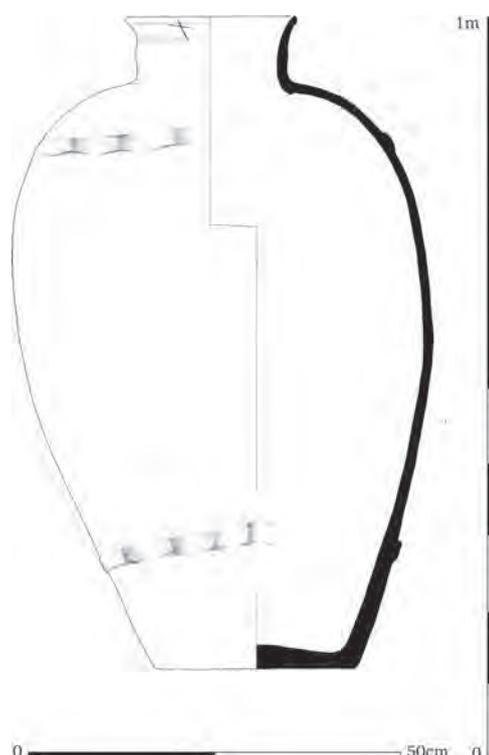


Figure 13. The Early Bronze Age I pithos from Stratum III (L31, Reg. no. 71/1; light orange/brown clay, poorly fired, large white grits).

as sickles. In the meantime, basing our interpretation on typology and the balance of evidence, we are confident in categorizing them as such.

Four sickles (Fig. 14:1-4) very much fit the Canaanean type: a prismatic profile, made by snapping typical Canaanean blades into segments to accommodate a sickle's necessarily curving form. This sickle type was in use throughout the 4<sup>th</sup> and

3<sup>rd</sup> millennia, and conceivably occurred as far back as the Chalcolithic (see Rosen 1997: 60; Rowan and Levy 1994; contra Milevski *et al.* 2011). The parallel longitudinal sides of this Canaanean sickle are a technical feat that may have been achieved using a punch, which could have been made of copper (Rosen 1997: 48). One of these Canaanean sickles (Fig. 14:1) was partly backed, suggesting that it was hafted.

One other sickle (Fig. 14:5) is in the backed-and-truncated sickle segment tradition, which is a Chalcolithic phenomenon in the southern Levant (apart from the Negev; Rosen 1997: 60).

Four of these sickles (Fig. 14:1-3,5) were made from light brown/gray medium-grained Eocene/Cretaceous flint. This is difficult to source but is widely available in the hills of Samaria, northern Galilee, the Shephelah and the central Negev (Rosen 1997: 33). The fourth sickle (Fig. 14:4) segment was made from a dark, fine-grained flint with white inclusions. The 'En Zetim and Meshash Formations (Senonian Age) are likely source candidates from this region (Khalaily 2003: 59).

#### **Blades (n=2)**

We uncovered one Canaanean (Fig. 15:2) and one *ad hoc* (Fig. 15:3) blade, the latter too fragmented for us to identify its type.

#### **Projectile point (n=1)**

This piece (Fig. 15:1) was most likely an arrowhead (but see discussion in Rosen 1997: 42-43). Such small projectile points developed as hunting was becoming less and less important in subsistence strategies, after the Pre-Pottery Neolithic B period (*ibid.*). Typologically this point seems to follow the Haparsa

Figure 14.

No.	Artifact type	Reg. no.	Square	Locus	Description
1	Sickle (Canaanean)	61/2	S5	27	Partly backed
2	Sickle (Canaanean)	58/1	S5	23	
3	Sickle (Canaanean)	65/1	S5	28	
4	Sickle (Canaanean)	61/1	S5	27	
5	Sickle (backed-and-truncated)	61/3	S5	27	



Figure 14. Early Bronze Age sickles from Stratum III.

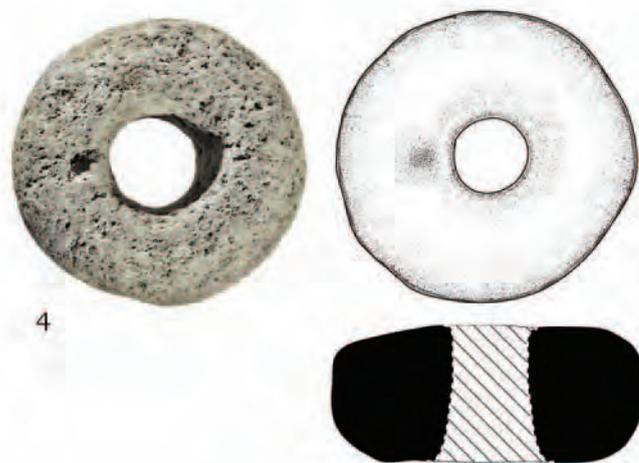
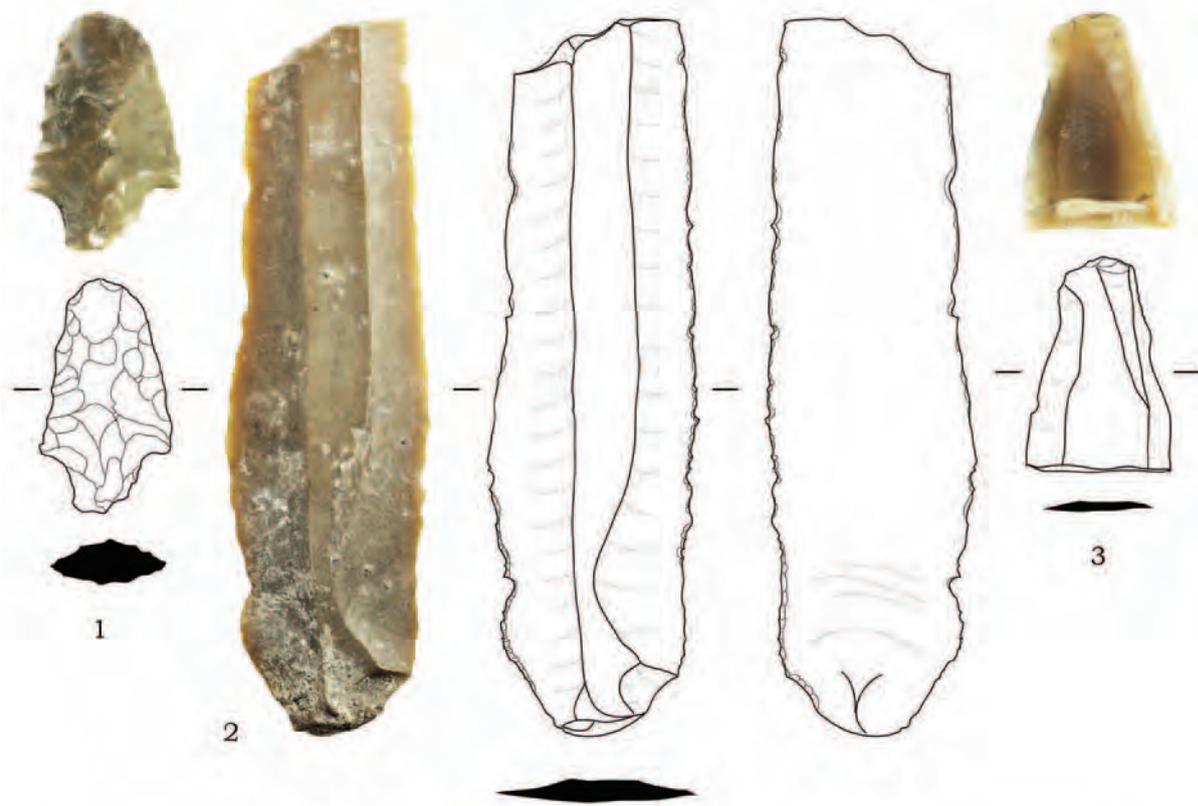


Figure 15. Early Bronze Age blades and a basalt weight from Stratum III.

Figure 15.

No.	Artifact type	Reg. no.	Square	Locus	Description
1	Projectile point	71/2	S5	31	Light brown flint
2	Blade	65/2	S5	28	Light brown flint
3	Blade	61/4	S5	27	Light brown flint
4	Weight	65/3	S5	28	Basalt

tradition, although in a less pronounced form; it has a tang but no 'wings'. Retouch is bifacial, and semi-abrupt.

Such pieces seem to date from the Neolithic through the EB I. Most are found in the desert regions of the southern Levant, although interestingly microlithic lunates—a related tool type—were also found in EB I tombs elsewhere in Azor (Ben-Tor 1975; Rosen 1983).

#### *Weight (n=1)*

This ring-shaped ground vesicular basalt piece (Fig. 15:4) most likely functioned as a suspension weight.

### SUMMARY

Tel Azor, situated on the road between Jaffa and Jerusalem, was hardly excavated prior to this project. At the top of the mound are the remains of a Crusader fortress, *Casal de Plains*, the ruins of which cover large areas of the *tel*. The current test pits and rescue excavation were concentrated mainly around the edges of the mound, so the full stratigraphic sequence of the *tel* has not yet been revealed. The excavation was conducted at the northern edge of the *tel*, where no archaeological investigations had taken place to date. Probably for this reason we did not expose remains from other periods known to have existed at the *tel* thanks to previous surveys and excavations (Ory 1942; Dothan 1961, 1989; Perrot 1961; Druks and Tsferis 1970; Ben-Tor 1973, 1975; Amiran 1985). On the other hand, the finds from our excavation support a picture of intensive occupation in the area during certain periods.

To recap, the excavation revealed a building or courtyard, and other constructions and rubbish pits

that most likely dated to recent centuries—the later Ottoman period. Pits and living surfaces, without any architecture, were also found that date to the Mamluk through early Ottoman periods.

Beneath the Late Islamic levels, an Early Bronze Age stratum was found, 2.5m thick and incorporating occupation surfaces and architectural elements. Due to the limited extent of the excavation it is hard to assess the nature of the site's earliest settlement, but we have inferred that the EB occupants based their economy on agriculture. We find evidence for this in the many sickle blades and the large pithos, which was used for storage. The subsistence pattern also included hunting, as evidenced by the flint arrowhead and the deer antler found next to the pithos.

The EB is the first archaeological period in this part of the site, its remains being found directly on the virgin *hamra* soil. No finds from the Chalcolithic period were recovered despite the many tombs from this period in an adjacent Azor cemetery (Perrot 1961). However, there is a possibility that the remains of the EB settlement found by our excavation were in fact associated with tombs discovered south and west of the *tel* (Ben-Tor 1975).

From the EB to the Mamluk period there appears to have been no settlement in the immediate area (though it should be reiterated that we know from previous surveys and probes that there was Middle Bronze, Late Bronze and Iron Age activity at the *tel*). From the Ottoman period onward, our excavation site was probably settled continually by the Arab village Yazur, up until 1948. The most recent phase of this settlement severely damaged earlier levels, as a result of intensive digging for rubbish pits and septic tanks.

## REFERENCES

- Alon, D. and Yekutieli, Y. 1995. The Tel Halif Terrace 'Silo Site' and its Implications for Early Bronze Age I. *Atiqot* 27: 149-190.
- Amiran, R., Beit-Arieh, Y. and Glass, J. 1973. The Interrelationship between Arad and Sites in Southern Sinai in the Early Bronze Age II. *Israel Exploration Journal* 23: 193-197.
- Amiran, R. 1985. Canaanite Merchants in Tombs of the Early Bronze Age I at Azor. *Atiqot* 17: 190-192.
- Anderson, P.C. 1980. A Testimony of Prehistoric Tasks: Diagnostic Residues on Stone Tool Working Edges. *World Archaeology* 2: 181-194.
- Avissar, M. 1996. The Clay Tobacco Pipes. In: Ben-Tor, A., Avissar, M. and Portugali, Y. (eds.) *Yokne'am I: The Late Periods* (Qedem Reports 3). Jerusalem. Pp. 198-201.
- Bakla, E. 2007. *Tophane Lüleciliği*. Istanbul. (Turkish)
- Baram, U. 1996. *Material Culture, Commodities, and Consumption in Palestine, 1500-1900* (PhD. dissertation, University of Massachusetts). Amherst.
- Baram, U. 1999. Clay Tobacco Pipes and Coffee Cup Sherds in the Archaeology of the Middle East: Artifacts of Social Tensions from the Ottoman Past. *International Journal of Historical Archaeology* 3(3): 137-151.
- Bent, J. T. 1893. *Early Voyages and Travels in the Levant*. London.
- Ben-Tor, A. 1973. Excavation of Two Burial Caves at Azor. *Qadmoniot* 22: 48-50. (Hebrew)
- Ben-Tor, A. 1975. Two Burial Caves of the Proto-Urban Period at Azor, 1971; The First Season of Excavations at Tel-Yarmuth, 1970. *Qedem* 1: 1-54.
- Braun, E. 1997. The Yiftah'el II Pottery Typology. In: Braun, E. (ed.) *Yiftah'el. Salvage and Rescue Excavations at a Prehistoric Village in Lower Galilee, Israel* (Israel Antiquities Authority Reports 2). Jerusalem. Pp. 60-89.
- Coles, J. 1973. *Archaeology by Experiment*. New York.
- Curwen, E.C. 1930. Prehistoric Flint Sickles. *Antiquity* 4: 179-186.
- Curwen, E.C. 1935. Agriculture and the Flint Sickles in Palestine. *Antiquity* 9: 61-66.
- Dekkel, A. 2008. The Ottoman Clay Pipes. In: Tzaferis, V. and Israeli, S. (eds.) *Panias Volume II. Small Finds and Other Studies* (Israel Antiquities Authority Reports 38). Jerusalem. Pp. 113-164.
- Dothan, M. 1961. *Yediöt Arkheologiot* 25: 224-230. (Hebrew)
- Dothan, M. 1989. *Eretz Israel* 20: 164-174. (Hebrew)
- Druks, A. and Tzaferis, V. 1970. Tel Azor. *Revue Biblique* 77: 578.
- Edelstein, G. and Avissar, M. 1997. A Sounding in Old Acre. *Atiqot* 31: 129-136.
- Gophna, R. and Blockman, N. 2004. The Neolithic, Chalcolithic, Early Bronze Age and Intermediate Bronze Age Pottery. In: Ussishkin, D. (ed.) *The Renewed Archaeological Excavations at Lachish (1973-1994) Volume III* (Sonia and Marco Nadler Institute of Archaeology Monograph Series 22). Tel Aviv. Pp. 873-899.
- Hayes, J.W. 1980. Turkish Clay Pipes: A Provisional Typology. In: Davey, P. (ed.) *The Archaeology of the Clay Tobacco Pipe*. Oxford. Pp. 233-395.
- Hayes, J.W. 1992. *Excavations at Saraçhane in Istanbul 2: The Pottery*. Princeton.
- Khalaili, H. 2003. The Chalcolithic and Early Bronze Age flint assemblages from Hörsat Hani (West). *Atiqot* 44: 59-63.
- Kocabaş, H. 1963. Tophane Pipe Making. *Türk etnografya dergisi V*, 1962: 12-13.
- Milevski, I., Fabian, P. and Marder, O. Canaanite Blades in Chalcolithic Contexts in the Southern Levant? In: Lovell, J.L. and Rowan, Y.M. (eds.) *Culture, Chronology and the Chalcolithic. Theory and Transition*. Oxford, Oakville. Pp. 149-159.
- Neuville, R. 1934-5. Les débuts de l'agriculture et la faucille préhistorique en Palestine. *Bulletin of the Jewish Palestine Exploration Society* 3: 17-42.
- Ory, J. 1942. A Bronze Age Tomb near Yazur. *Quarterly of the Department of Antiquities in Palestine* 10: 59-61.

- Perrot, J. 1961. Une Tombe à Ossuaires du IV<sup>e</sup> millénaire à Azor. *Atiqot* 3: 1-83.
- Raban, A. 1971. The Shipwreck off Sharm-el-Sheikh. *Archaeology* 24: 146-155.
- Robinson, R. C. 1983. Clay Tobacco Pipes from the Kerameikos. *Athenische Mitteilungen* 98: 265-285.
- Rosen, S.A. 1983. The Microlithic Lunate: An Old-New Tool Type from the Negev, Israel. *Paléorient* 9: 81-83.
- Rosen, S.A. 1997. *Lithics After the Stone Age: Handbook of Stone Tools from the Levant*. London.
- Rowan, Y.Mc C. and Levy, T.E. 1994. Proto-Canaanite Blades of the Chalcolithic Period. *Levant* 26: 167-174.
- Simpson S. 2000. The Clay Pipes. In: Harper, R.P. and Pringle, D. (eds.) *Belmont Castle, The Excavation of a Crusader Stronghold in the Kingdom of Jerusalem*. Oxford. Pp. 147-171.
- Simpson S. 2002. Ottoman Pipes from Zir'in (Tell Jezreel). *Levant* 34: 159-174.
- Simpson S. 2008. The Ottoman Pipes from Jerusalem. In: Prag, K. (ed.) *Excavations by K.M. Kenyon in Jerusalem 1961-1967, Volume V, Discoveries in Hellenistic to Ottoman Jerusalem*. Oxford. Pp. 433-446.
- Stančeva, M. 1975/6. La confection de pipes en Bulgarie. *Muzej Primenjene Umetnosi, Muzejske Zbirke* 19/20: 129-137.
- Steensberg, A. 1943. *Ancient Harvesting Implements*. Copenhagen.
- Unger-Hamilton, R. 1984. The Formation of Use-Wear Polish on Flint: Beyond the "Deposit Versus Abrasion" Controversy. *Journal of Archaeological Science* 11: 91-98.
- Unger-Hamilton, R. 1991. Micro-Wear Analysis of Scrapers and "Sickle Blades". In: Betts, A.V.G. (ed.) *Excavation at Jawa 1972-1986: Stratigraphy, Pottery and Other Finds* (Volume I). Edinburgh. Pp. 149-53.
- Vincenz, A. de. 2011. Ottoman Clay Tobacco Pipes from Ramla. *Atiqot* 67: 43-53. (Hebrew)
- Ward, C. 2000. The Sadana Island Shipwreck. A Mid-eighteenth-Century Treasure Trove. In: Baram, U. and Carroll, L. (eds.) *A Historical Archaeology of the Ottoman Empire*. New York. Pp. 185-202.