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The Mollusks from Tel Bet Yeraḥ

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Introduction

A total of 52 bivalve remains were retrieved from the excavation at Tel Bet Yeraḥ Area AG: 49 specimens originated from the Sea of Galilee and 2 from the Mediterranean Sea. The shells were found in strata dated to EB II and III (see Golani, this volume).[1] This assemblage also includes 11 specimens from unclear or mixed contexts.

Methodology

The shells were mostly retrieved manually; sieving (1 × 1 cm mesh) was undertaken for loci with clear stratigraphic context. The identification of freshwater shells was based on the manual by Milstein, Mienis and Rittner (2012), while the remainder of the material could be readily identified without the aid of a guide. The remains were quantified using the Number of Identified Specimens (NISP), and their degree of completeness was noted either as 'broken,' referring to valves of which more than half was preserved, or as 'fragment' when less than half was preserved.

Results

The local freshwater bivalves belong to two species, *Unio terminalis terminalis* and *Potomida littoralis semirugata*, while the marine shells belong to the species *Glycymeris nummaria* (Table 1). The EB II Stratum IV material comprises four valves of *Unio terminalis terminalis* from debris above a beaten-earth surface: two complete and one broken valves in L134, and one broken valve in L138.

Thirty-eight shells of *Unio terminalis terminalis* were found in 14 different loci of EB III (Table 2), mainly in accumulations above beaten-earth surfaces or the surface make-up. Four broken valves of the freshwater species *Potomida littoralis semirugata* were found in three loci of this period (L116, L118, L122). Two other fragments of freshwater bivalves

[1] I thank Amir Golani for the opportunity to study the material from this excavation.

Table 1. Species by Region of Origin and Period

Origin	Species	EB II	EB III	Mixed Contexts
Sea of Galilee	*Potomida littoralis semirugata*		4	
	Unio terminalis terminalis	4	29	10
	Potomida/Unio		4	
Mediterranean	*Glycymeris nummaria*		1	1
Total		*4*	*37*	*11*

Table 2. Specimens of *Unio terminalis terminalis* from EB III and Unclear/Mixed Contexts

Locus	Context	Specimen Completeness
100	Topsoil	1 complete
104	Debris above beaten-earth surface	1 broken, 1 fragment
107	Debris upon beaten-earth surface west of W200	1 fragment
108	Debris upon beaten-earth surface	1 broken
109	Debris upon beaten-earth surface and mixed debris	1 complete, 1 broken
110	Debris upon beaten-earth surface west of W200	2 broken
111	Mixed debris	1 complete, 1 broken, 1 fragment shaped into a rectangle
112	Surface bedding	3 complete and one broken specimens and one fragment
115	Debris above beaten-earth surface	1 fragment
116	Surface bedding	1 complete, 1 fragment
118	Debris upon beaten-earth surface	2 complete, 8 broken 3 fragments
123	Debris upon surface east of W205	2 complete
130	Debris upon beaten-earth surface	1 complete
131	Debris upon beaten-earth surface and surface bedding	1 complete, 1 broken
132	Debris upon surface	1 broken
134	Debris upon surface	2 complete, 1 broken
138	Debris upon surface north of W215	1 broken

could not be identified to species level, and are noted as *Potomida*/*Unio*. A broken valve of *Glycymeris nummaria* with an artificial perforation in the umbo was found in debris upon a beaten-earth surface (L118; Fig. 1). The simple perforation of the shell was the most common method of fashioning a shell ornament in antiquity. The artificial nature of the perforation in the present example is indicated by its large size and raggedness, suggesting the use of direct percussion in its manufacture (see Francis 1989:27). Shell perforations formed through natural abrasion by sea action, on the other hand, tend to be small and

Fig. 1. *Glycymeris nummaria* shell with artificial perforation.

Fig. 2. Two freshwater shell fragments cut into a rectangular shape.

smooth. This Mediterranean Sea shell was likely collected on the shore and used as a pendant or another kind of ornament.

Fragments of a freshwater shell with nacre in shades of white and light pink were cut into a rectangular shape (Fig. 2), possibly to be used as inlays in decorative objects: one fragment belonging to *Unio terminalis terminalis* was found in a mixed context (L111), and two other fragments, either *Potomida* or *Unio*, were found above EB III Surface 122, east of W205.

Discussion

The shells from Tel Bet Yeraḥ Area AG indicate the exploitation of nearby sources for food and raw material for fashioning decorative items, as well as long distance trade connections with the Mediterranean coastal region.

This assemblage contains only two of the 18 species of freshwater bivalves that occur naturally in the Sea of Galilee (see Milstein, Mienis and Rittner 2012). Both these species are edible bivalves with nacreous interior. Although the use of bivalves as food does not leave recognizable traces on the shells, this possibility has been mentioned in a previous study of the mollusks of Tel Bet-Yeraḥ (Mienis 2014), and in another study of such material from EB I and II layers at Tel Qashish (Bar-Yosef Mayer 2003:419).

The present material lacks specimens imported from the Nile River and the Red Sea, which are commonly found in EB I–II contexts throughout the Levant (Bar-Yosef Mayer 2002). The reason for this may be the substantial decline in trade between Egypt and Canaan in EB III (Miroschedji 2002). This observation is reinforced by the absence of evidence of exchange in the Nile River species *Chambardia rubens* and the Red Sea species *Pinctada margaritifera* during EB III at many sites (Milevski 2005:210), e.g., Tell el-Ḥesi,[2] Tel Yarmut Site D203,[3] Tell es-Sultan (Nigro et al. 2018), Tel Qashish (Bar-Yosef Mayer 2003), and a number of sites in Transjordan (Sala 2014). At Megiddo, such shells were absent from EB III contexts in the excavation seasons of 1992–1996 (Bar-Yosef Mayer 2000), and were present in very low numbers in those of 1998–2002 and 2004–2008, which yielded four specimens of Nile River *Chambardia rubens* and two of Red Sea species, *Nerita sanguinolenta* and *Lambis truncate* (Bar-Yosef Mayer and Baruch 2006; Ktalav 2013). It is noteworthy that the trade in mollusks between Egypt and the Southern Levant ceased during EB III, while trade in domestic livestock continued (Arnold et al. 2016; Greenfield et al. 2020).

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[2] The unpublished material from Tell el-Ḥesi, uncovered in an excavation by Jeffrey A. Blakely (License Nos. G-8/1970, G-11/1971, G-18/1973, G-26/1975, G-19/1977, G-37/1979), was examined by the author.

[3] The unpublished material from Tel Yarmut Site D203, uncovered in an excavation by Sivan Mizrahi (Permit No. A-7185), was examined by the author.

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