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Byzantine and Early Islamic Malacological Remains from Building 900 in the Southern Tyropoeon Valley

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The malacological remains presented in this article shed light on the trade and culinary habits of the inhabitants of Jerusalem during the Byzantine and Early Islamic periods. All the shells were brought to the site from distant sources, such as the Mediterranean Sea, the Red Sea and the Nile River, indicating trade connections. The shells seem to have been utilized for aesthetic purposes and for consumption, as also recorded in other excavations in Jerusalem.

Keywords: City of David, Byzantine period, Early Islamic period, mother-of-pearl, molluscs

Introduction

The excavation on the western slope of the City of David uncovered 31 molluscs from the Byzantine (Phases IIa–b) and Early Islamic (Phase I) periods, retrieved from accumulations atop and below the floors of Building 900 (see Szanton and Uziel, this volume).[2] The shells were collected manually and identified to species level.

Taxonomic assignment was based on identification guides of the European (Poppe and Goto 1991) and the Red Sea and eastern Arabian (Bosch et al. 1995; Rusmore-Villaume 2008) shells, and data in the WoRMS online database (http://www.marinespecies.org/). The measure of number of identified specimens (NISP) was used for taxonomic quantification (Lyman 1994; Reitz and Wing 1999). Taphonomic observations were employed to distinguish between specimens gathered as live animals for consumption and others which had been collected as empty shells along the seashore, possibly for decorative purposes (Claassen 1998; Gordillo and Archuby 2014).

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RESULTS

The assemblage comprises Mediterranean Sea shells (N = 27), two fragments of *Chambardia rubens* from the Nile and one fragment of *Cypraea pantherina* from shallow waters of the Red Sea (see Heiman 2002:42–48; Table 1). In addition, one fragment of an unidentified freshwater bivalve was found. Among the Mediterranean shells, those of *Donax trunculus* were relatively unworn, indicating that they were most likely collected while alive, possibly by sifting sand with a colander. The *D. trunculus* is a very common bivalve of the Mediterranean Sea and the Atlantic coasts of Western Europe, inhabiting intertidal and infralittoral zones (Poppe and Goto 1991:113). Three of the shells of this species have a V-shaped break along the ventral margin, indicating that the closed live mollusc was opened by inserting and twisting a blade between the valves. No indication of burning was noted.

The specimen of *Glycymeris nummaria* was worn, indicating that it was collected as an empty shell from the seashore. Live specimens of this species are rarely found along the Mediterranean coast, while empty valves form the bulk of the shells on the beach (Mienis et al. 2006; see also Bar-Yosef Mayer 2005; Sivan et al. 2006). This species (formerly known as *G. insubrica*) is one of three *Glycymeris* species known from the eastern Mediterranean coast of Israel: *G. bimaculata, G. pilosa and G. nummaria.*

The relatively poor state of preservation of the shell fragments of Nile *Chambardia rubens* and Red Sea *Cypraea pantherina* did not permit determining their manner of collection. *C. rubens*, with a solid and ovate shell, is a large freshwater mussel distributed

Table 1. The Composition of Mollusc Finds According to their Chronological Phase

Locus	Context Description	Mollusc Finds
Byzantine (Phase IIb)		
124	Fill under L121	1 broken valve of *Glycymeris nummaria* 9 complete valves of *Donax trunculus* 1 fragment of an unidentified freshwater valve 2 of the *Donax* valves have a V-shaped break along the ventral margin
126	Mixed fill under L124	1 broken valve of *Donax* trunculus
Early Islamic (Phase 1)		
104	Collapsed stones	5 valves of *Donax trunculus* 3 complete and two broken; one of the broken valves is small and has a V-shaped break along the ventral margin
105	Soil accumulation	1 fragment of the lip of *Cypraea pantherina*
112	Plaster floor	2 complete valves of *Donax trunculus* 1 fragment of *Chambardia rubens*
201	Fill	2 complete valves of *Donax trunculus*
203	Collapsed stones	2 complete valves of *Donax trunculus*
207	Plaster floor	1 fragment of *Chambardia rubens* 4 complete 1 broken valves of *Donax trunculus*

across northeastern, central and west Africa. The interior of such shells is a pink mother-of-pearl hew, which changes to white when exposed to sunlight (Pain and Woodward 1962:75; Mandahl-Barth 1988:73).

Discussion and Conclusions

The malacological remains presented in this report are informative in regard to the trade and culinary habits in the City of David during the Byzantine and Early Islamic periods. All the shells were brought to the site from distant sources, indicating contacts with the Mediterranean, the Red Sea and the Nile River.

The trade connections indicated by the Mediterranean shells seem to have continued throughout the Byzantine and the Early Islamic periods. The presence of two specimens of Nile *Chambardia rubens* from Early Islamic-period contexts demonstrate a long-distance trade with Egypt at that time. Both specimens were unworked and their use at the site could not be determined. The possibility that they were utilized for aesthetic purposes is suggested by their mother-of-pearl interior. It is noteworthy that the one fragment of Red Sea *Cypraea pantherina* was also retrieved from an Early Islamic-period context.

The culinary role of *Donax* bivalves, 84% of the assemblage from Building 900, is suggested by the fact that they are commonly consumed nowadays as a gourmet delicacy, usually used to make clam broth, in France, Spain and Portugal (Davidson 2014:867). Multiple specimens of this species were retrieved from two of the excavation contexts, one Byzantine and the other Early Islamic. The indication that these bivalves were collected live from the Mediterranean Sea and may have been pried open with a tool aligns with the possibility that they served as food in Jerusalem. Shells of *D. trunculus* used as food were found in other excavations in Jerusalem (Reese 1995:266; 2008:455; Mienis 2003:409; Ktalav 2020) and in the Negev Desert (Ktalav et al. 2021). This species became increasingly popular as a food item during the Late Roman and, especially, the Byzantine periods (Mienis 2003:409). As mussels are prohibited for consumption by Muslims, their presence in contexts of Phase I may indicate that the residents of the site at that time were Christians, or that strict Islamic dietary prohibitions had not yet become commonly observed at the beginning of the Early Islamic period (see also Marom, this volume).

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