

OTTOMAN-PERIOD MOLLUSCS FROM THE HARBOR AREA, YAFO (JAFFA)

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This report discusses 558 malacological remains from a salvage excavation at the harbor of Yafo (Jaffa; see Haddad and Glick, this volume).¹ The shells were retrieved manually and identified to species level, following the systematic classification of the World Register of Marine Species (WoRMS; <http://www.marinespecies.org/>). The assemblage includes Mediterranean shells (n = 287) and Indo-Pacific bivalves (n = 270), and a single land snail, *Levantina caesareana*. The quantities were based on the Number of Identifiable Specimens (NISP). Most of the assemblage is dated to the Ottoman period, as determined by the archaeological contexts (see Haddad and Glick, this volume).

THE FINDS

Mediterranean Seashells

The Mediterranean seashells (n = 287) included *Patella caerulea*, *Neverita josephina*, *Bolinus brandaris*, *Hexaplex trunculus*, *Stramonita haemastoma*, *Columbella rustica*, *Conus ventricosus*, and *Glycymeris nummaria* (Table 1). This is to be expected as the site is located on the Mediterranean shore. The shells were mostly found in fill contexts, or in mixed layers. The worn state of most of the shells shows that they were probably collected from the shore as empty shells.

Indo-Pacific Ocean

The rest of the marine malacological assemblage comprised many fragments of the Blacklip *Pinchada margaritifera*. The *Pinchada margaritifera* is a large bivalve (up to 20 cm), common in the Red Sea and the Persian Gulf, the Blacklip variant coming from the Indo-

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Table 1. The Origin and Frequencies of the Marine Mollusc Species

Origin	Species	NISP
Mediterranean (N = 287)	<i>Patella caerulea</i>	2
	<i>Neverita josephina</i>	6
	<i>Bolinus brandaris</i>	6
	<i>Hexaplex trunculus</i>	22
	<i>Stramonita haemastoma</i>	2
	<i>Columbella rustica</i> ⁱ	1
	<i>Conus ventricosus</i> ⁱⁱ	1
	<i>Glycymeris nummaria</i>	247
Indo-Pacific Ocean	<i>Pinctada margaritifera</i>	270

ⁱ Previously known as *Conus mediterraneus* (<http://www.marinespecies.org> 14.1.20).

ⁱⁱ Previously known as *Glycymeris insubria* (<http://www.marinespecies.org> 29.8.14).

Pacific Ocean. *Pinctada margaritifera* is distributed in shallow lagoons, bays and channels. The blacklip oyster has been harvested in East Africa for mother of pearl for decades (Kimani and Mavuti 2002).

The *Pinctada margaritifera* remains were mostly found when dismantling floors dated to the Ottoman period, and in the foundation trench of the Ottoman Custom House. Of the 270 fragments² retrieved, 244 exhibited rounded perforations, the other 26 specimens either exhibiting a straight cut or apparently unworked (Fig. 1). The perforations were made with a hollow drill of various diameters (9–28 mm; Fig. 2). The fragments were the result of the use of the shell as raw material for the production of buttons, although the buttons were not manufactured in Yafo. During the nineteenth century, the Blacklip *Pinctada margaritifera* was imported from the Indo-Pacific Ocean to Europe (mostly to Vienna) for the button industry. The production waste reached Yafo, presumably en route to Jerusalem and Bethlehem, where it was used as raw material for inlaying religious souvenirs (Avitzur 1976:204; 1994:218; Ktalav 2015; 2020; 2021).

² The term ‘fragment’ refers to a valve of which less than half was preserved; the term ‘broken’ refers to an incomplete valve of which more than half is preserved.

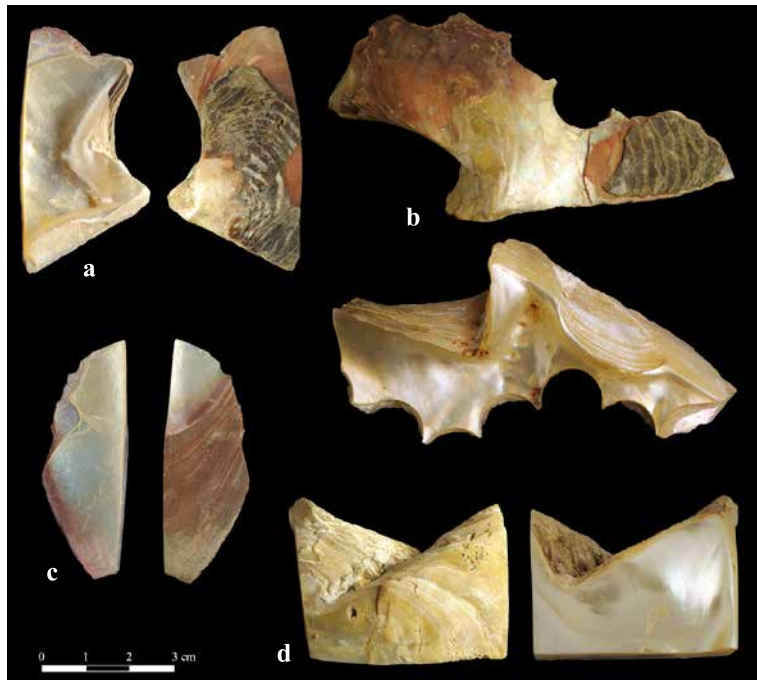


Fig. 1. Fragments of the blacklip pearl oyster (*Pinctada margaritifera*): unworked, sawed and button waste.

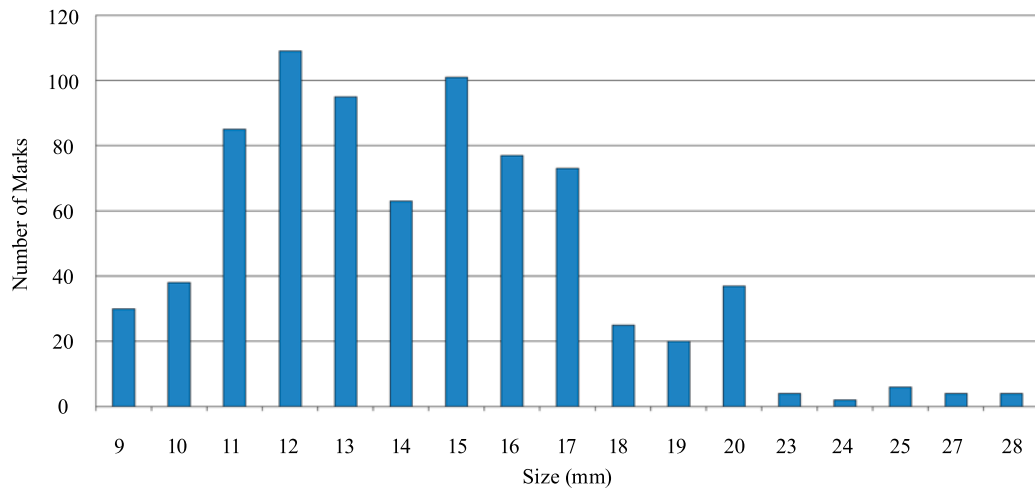


Fig. 2. Number and size of disk-extraction marks.

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