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Shells from the Excavation of Yavne-Yam (North)

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The salvage excavation at Yavne-Yam (North), carried out by Moshe Ajami and Uzi 'Ad (this volume),[2] yielded several samples of shells.

Material and Methods

The eight mollusc samples submitted for identification were collected in six loci: three in Area B and three in Area C. Most of the shells could be identified on site. In a few cases, shell fragments were compared with recent samples in the Mollusc Collection of Tel Aviv University. The bulk of the sample was collected in the so-called shell-pit in Area C (L321; see Ajami and 'Ad, this volume: Plan 8); only the presence of the various species was noted.

Results

The results of the studied material are listed in systematic order in Table 1.

Discussion

The excavated shell material includes a mixture of marine, terrestrial and freshwater molluscs. They belonged to 33 different species, which originated in three different regions: 24 species are from the Mediterranean Sea, 8 gastropods are local terrestrial species from the dune area between Yavne-Yam and Palmaḥim and a single bivalve species is obviously from the nearby stream of Naḥal Soreq (Table 2).

The excavated material dates back from the Persian to the Roman periods. Most of the species were encountered in the sample from Area C, dated to the Roman period (Table 3).

All the mollusc species collected during the excavation of Yavne-Yam (North) are still living in or near the site (the land snails) or can be found on the nearby Mediterranean beach. Only the freshwater mussel *Unio mancus eucirrus* has disappeared from Naḥal Soreq due to severe pollution of its waters in recent times.

The presence of the land snail *Theba pisana* within a Roman-period context at Yavne-Yam (North) is interesting. Heller and Tchernov (1978) considered *Theba pisana* a possible ancient introduction, since they did not find it among the Pleistocene land snails occurring in the coastal plain of Israel. However, that species has already been found in the underwater Neolithic wells off 'Atlit (Mienis, unpublished).

None of the marine shells show clear-cut markings of manipulation; however, some of the *Glycymeris* valves with a hole in the umbo might have served as a shell pendant. The same is true for some of the holed valves of *Acanthocardia*.

Interestingly, most of the shells belonging to *Bolinus, Hexaplex* and *Stramonita*, all species which have been intensively exploited for the purple dye production, appear to have a beach-rolled impression, i.e., they were certainly not collected alive. This stands in strong contrast with the majority of the shells of at least *Bolinus brandaris*, which were uncovered in very large numbers in the nearby excavations of Moshe Fischer. The shells found there clearly show that they were collected alive and were most probably exploited for dyeing purposes (Mienis, unpublished).

It seems, therefore, that most of the marine shells at the site were used as building material, e.g., as mortar. At other places along the coast, such shells, in particular *Glycymeris nummaria*, have been laid down, often in large quantities, as building foundations (Ronen 1980).

Table 1. Enumeration of the Shells Recovered from Yavne-Yam (North)

Area	Locus	Basket	Class	Family	*Species*	Description
C	321	3013	Gastropoda	Trochidae	*Gibbula varia*	Present
C	321	3013	Gastropoda	Potamididae	*Potamides conicus*	Present
B	232	2064	Gastropoda	Naticidae	*Neverita josephinia*	1 complete shell
B	279	2550	Gastropoda	Naticidae	*Neverita josephinia*	1 complete shell
C	305	3002	Gastropoda	Naticidae	*Neverita josephinia*	1 complete shell
C	321	3012	Gastropoda	Naticidae	*Neverita josephinia*	3 shells
C	321	3013	Gastropoda	Naticidae	*Neverita josephinia*	Present
C	321	3011	Gastropoda	Tonnidae	*Tonna galea*	1 complete shell damaged during the excavation
C	321	3012	Gastropoda	Tonnidae	*Tonna galea*	3 fragments belonging to at least 2 specimens
B	278	2549	Gastropoda	Ranellidae	*Cymatium parthenopeum*	1 small fragment of the labial lip of the aperture
B	279	2550	Gastropoda	Muricidae	*Bolinus brandaris*	1 shell missing the siphonal canal
C	307	3005	Gastropoda	Muricidae	*Bolinus brandaris*	1 shell
C	321	3011	Gastropoda	Muricidae	*Bolinus brandaris*	1 shell missing part of the siphonal canal
C	321	3012	Gastropoda	Muricidae	*Bolinus brandaris*	90 beach-rolled specimens
C	321	3013	Gastropoda	Muricidae	*Bolinus brandaris*	Present
B	232	2064	Gastropoda	Muricidae	*Hexaplex trunculus*	1 shell
C	307	3005	Gastropoda	Muricidae	*Hexaplex trunculus*	1 shell missing the top whorls; it has a small hole in the body whorl
C	321	3012	Gastropoda	Muricidae	*Hexaplex trunculus*	22 beach-rolled shells
C	321	3013	Gastropoda	Muricidae	*Hexaplex trunculus*	Present
C	321	3013	Gastropoda	Muricidae	*Ocinebrina edwardsi*	Present
B	278	2549	Gastropoda	Muricidae	*Stramonita haemastoma*	1 shell with a damaged aperture
C	305	3002	Gastropoda	Muricidae	*Stramonita haemastoma*	1 shell with a damaged aperture
C	321	3011	Gastropoda	Muricidae	*Stramonita haemastoma*	1 complete shell
C	321	3012	Gastropoda	Muricidae	*Stramonita haemastoma*	5 partly damaged shells
C	321	3013	Gastropoda	Muricidae	*Stramonita haemastoma*	Present
C	321	3012	Gastropoda	Nassaridae	*Nassarius circumcinctus*	1 shell with a hole in the apex
C	321	3013	Gastropoda	Nassaridae	*Nassarius circumcinctus*	Present
C	321	3013	Gastropoda	Nassaridae	*Nassarius gibbosulus*	Present
C	321	3013	Gastropoda	Nassaridae	*Nassarius mutabilis*	Present
C	321	3013	Gastropoda	Nassaridae	*Nassarius nitidus*	Present
C	321	3012	Gastropoda	Conidae	*Conus mediterraneus*	1 juvenile shell with a hole in the apex

Table 1. (cont.)

Area	Locus	Basket	Class	Family	*Species*	Description
C	321	3013	Gastropoda	Conidae	*Conus mediterraneus*	Present
C	321	3013	Gastropoda	Enidae	*Euchondrus sulcidens*	Present
C	321	3013	Gastropoda	Enidae	*Euchondrus species*	Present
C	321	3013	Gastropoda	Trissexodontidae	*Caracollina lenticula*	Present
C	321	3013	Gastropoda	Hygromiidae	*Microxeromagna lowei*	Present
C	321	3013	Gastropoda	Hygromiidae	*Monacha syriaca*	Present
C	321	3012	Gastropoda	Hygromiidae	*Xeropicta vestalis joppensis*	1 damaged shell
C	321	3013	Gastropoda	Hygromiidae	*Xeropicta vestalis joppensis*	Present
B	279	2550	Gastropoda	Helicidae	*Helix engaddensis*	Body whorl only
C	321	3013	Gastropoda	Helicidae	*Theba pisana*	Present
C	321	3013	Scaphopoda	Dentaliidae	*Dentalium inaequicostata*	Present
B	232	2064	Bivalvia	Glycymerididae	*Glycymeris nummaria*	1 valve
B	278	2549	Bivalvia	Glycymerididae	*Glycymeris nummaria*	210 items belonging to at least 82 valves, 32 with a hole in the umbo
B	279	2550	Bivalvia	Glycymerididae	*Glycymeris nummaria*	66 items belonging to at least 50 valves, 11 with a hole in the umbo
C	305	3002	Bivalvia	Glycymerididae	*Glycymeris nummaria*	5 valves, 2 with a hole in the umbo
C	307	3005	Bivalvia	Glycymerididae	*Glycymeris nummaria*	7 valves, 1 with a hole in the umbo
C	321	3011	Bivalvia	Glycymerididae	*Glycymeris nummaria*	1 damaged valve with an irregular hole in the umbo
C	321	3012	Bivalvia	Glycymerididae	*Glycymeris nummaria*	31 items belonging to at least 29 valves, 13 with a hole in the umbo
C	321	3013	Bivalvia	Glycymerididae	*Glycymeris nummaria*	Present
C	321	3011	Bivalvia	Ostreidae	*Ostrea edulis*	A small lower valve adhered to the base of *Tonna galea*
C	321	3012	Bivalvia	Ostreidae	*Ostreola stentina*	1 lower valve
C	321	3013	Bivalvia	Lucinidae	*Loripes lucinalis*	Present
C	321	3013	Bivalvia	Unionidae	*Unio mancus eucirrus*	1 small fragment of the ventral margin
B	278	2549	Bivalvia	Cardiidae	*Acanthocardia tuberculata*	1 small fragment
C	321	3012	Bivalvia	Cardiidae	*Acanthocardia tuberculata*	25 valves, 12 with a hole in the umbo
C	321	3013	Bivalvia	Donacidae	*Donax semistriatus*	Present
C	321	3013	Bivalvia	Donacidae	*Donax trunculus*	Present
C	321	3013	Bivalvia	Veneridae	*Chamalea gallina*	Present
C	321	3013	Bivalvia	Veneridae	*Venus verrucosa*	Present

Table 2. The Shell Material according to Geographic Origin

Biotope	Marine	Terrestrial	Freshwater
Geographic Origin	Mediterranean Sea	Local Dune Area	Naḥal Soreq
Species	*Gibbula varia* *Potamides conicus* *Neverita josephinia* *Tonna galea* *Cymatium parthenopeum* *Bolinus brandaris* *Hexaplex trunculus* *Ocinebrina edwardsi* *Stramonita haemastoma* *Nassarius circumcinctus* *Nassarius gibbosulus* *Nassarius mutabilis* *Nassarius nitidus* *Conus mediterraneus* *Antalis inaequicostata* *Glycymeris nummaria* *Ostrea edulis* *Ostreola stentina* *Loripes lucinalis* *Acanthocardia tuberculata* *Donax semistriatus* *Donax trunculus* *Chamalea gallina* *Venus verrucosa*	*Euchondrus sulcidens* *Euchondrus species* *Caracollina lenticula* *Microxeromagna lowei* *Monacha syriaca* *Xeropicta vestalis joppensis* *Helix engaddensis* *Theba pisana*	*Unio mancus eucirrus*
Total	24	8	1

Table 3. The Shells according to Archaeological Periods

Archaeological Periods	Pers.–Hell.	Rom.
Area	B	C
Gibbula varia	-	+
Pomatides conicus	-	+
Neverita josephinia	+	+
Tonna galea	-	+
Cymatium parthenopeum	+	-
Bolinus brandaris	+	+
Hexaplex trunculus	+	+
Ocinebrina edwardsi	-	+
Stramonita haemastoma	+	+
Nassarius circumcinctus		+
Nassarius gibbosulus	-	+
Nassarius mutabilis	-	+
Nassarius nitidus	-	+
Conus mediterraneus	-	+
Euchondrus sulcidens	-	+
Euchondrus species	-	+
Caracollina lenticula	-	+

Archaeological Periods	Pers.–Hell.	Rom.
Area	B	C
Microxeromagna lowei	-	+
Monacha syriaca	-	+
Xeropicta vestalis joppensis	-	+
Helix engaddensis	+	-
Theba pisana	-	+
Antalis inaequicostata	-	+
Glycymeris nummaria	+	+
Ostrea edulis	-	+
Ostreola stentina	-	+
Loripes lucinalis	-	+
Unio mancus eucirrus	-	+
Acanthocardia tuberculata	+	+
Donax semistriatus	-	+
Donax trunculus	-	+
Chamalea gallina	-	+
Venus verrucosa	-	+
Total number of species: 33	8	31

Conclusion

The shells retrieved from the excavation of Yavne-Yam (North) are all of local origin, i.e., they were found within a radius of 5 km from the site. Some valves of *Glycymeris* and *Acanthocardia* might have been used as pendants. Most of the other marine shells probably served as building material. All the land snails recovered at the site are still prevalent in the area. The presence of *Theba pisana* is of particular interest: there are hardly any records of that species from archaeological sites, whereas today it occurs in dense populations along the coastal region of Israel.

NOTES

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