

excavated, a square room (5.50×5.50 m.) was uncovered, with a mosaic floor in simple geometric design (Pl. 52:C). Three storage jars, of different types, were lying on the floor, as well as two unusually long (28.5 cm.) lance blades. These, as well as a large sword discovered on one of the floors, are probably evidence of the battle that took place in the town before its destruction. It has yet to be established whether these weapons are Byzantine or Islamic.

On the floor was a layer 15–20 cm. thick of carbonized wood, pointing to a ceiling that had collapsed on the floor. Over this layer were fragments of a mosaic floor executed in a geometric pattern with very small tesserae; it was not possible to reconstruct the exact pattern. This is the first time in the Shiqmona excavations that evidence has been discovered of the existence of an upper floor in a building. The ceiling was constructed on a frame of wooden beams. It is of interest that the first floor had the better mosaic and was apparently used for residence, while the ground floor was used for shops, workshops etc. It should be noted that the mosaics here do not have the very rich geometric designs of the northern quarter; it seems that in the earlier period floors of shops and workshops were more lavishly made.

Attached to this room was a cellar or pit, used in later periods as a store-room. Six large globular black jars were found on the later floor at the level of the edge of the pit. A large glass bottle was also uncovered here as well as two gold ornaments — quite a rare find in the town. The fill contained parts of mosaic floors and many remains of plaster painted in brown, black and red. Some coins, in an excellent state of preservation, were also found here. The original floor of the cellar, of flagstones, was 2.50 m. below the floor of the room. The upper wall of the cellar is built of ashlar, while the lower part is natural rock, and it is connected with a drainage system.

Some additional sections of walls and parts of six mosaic floors, not yet fully excavated, were discovered in the area. Parts of streets were also discovered, all with the usual drainage system built of stone beneath them. As had already been learnt in previous seasons the street levels were, in most cases, much higher

than today's surface level and the original pavement of the street is therefore seldom preserved. The floors of the buildings, on the other hand, were lower than street level; all wall foundations facing the floor are protected by a thick layer of hard plaster. Also discovered was an installation connected with a system of pottery pipes. The excavators encountered some difficulties in trying to identify the numerous installations in the Byzantine town. A group of bronze objects discovered in a very thick layer of lime and some bronze and glass weights should be noted.

Some stones found in the debris of walls and partitions are architectural fragments of churches, for example column capitals with crosses. It is highly probable that these stones were taken from the churches destroyed during the Parthian invasion in A.D. 614. In future years excavations will continue in these areas with the intention of uncovering the entire Byzantine town and preserving it as an archaeological site for the public.

(Communicated by Joseph Elgavish)

Underwater Investigations by the Department of Antiquities and Museums

During the past decade, the Department of Antiquities and Museums has entered the realm of underwater archaeology. The Department now has a full-time Inspector of Underwater Antiquities with a part-time assistant. Diving and boating equipment has been acquired, and a sea base is now located at Kibbutz Nahsholim on the Carmel coast. Work is carried out in conjunction and in full cooperation with the Undersea Exploration Society of Israel (UESI) and the sea workshop of the University of Haifa's Center for Maritime Studies. Of the various underwater discoveries made since the Department entered this field, the following are the most significant.

Dor/Tantura. For the past two years an underwater survey has been carried out in the area of Tel Dor, with the assistance of the Nahsholim, Ma'agan Mikha'el and 'En ha-Shofet branches

of the UESI. The survey has centred around the large bay bordering the southern extremity of the mound and the area between the chain of islands directly to the south of it (Sheḥafit, Dor, Tafat, and Ḥopami) and the shore. The seabed in this region is buried under a sand cover which is continually shifting. As the sand moves, it reveals portions of the actual seabeds for varying periods of time. These clearings were dived on and artifacts lying on them were recorded (Pl. 56:A).

The survey has revealed over fifty stone anchors and net weights found singly and in grouped sites. Perhaps the most interesting anchor site was found between the islands of Ḥopami and Tafat. Here more than twenty anchors were found grouped together in a well-defined anchorage site (Pl. 56:B,C). One anchor has typological parallels in two anchors from Ugarit which date from the MB or LB (H. Frost: *Ugaritica* 6 [1969], pp. 242-245, Nos. 27-28). This anchor, along with others found in its proximity, suggests that a Bronze Age anchorage of Dor was located between the island chain and the coast, an area sheltered from winds which forms an ideal natural proto-harbour. The anchor site under discussion may perhaps be best understood as the entrance to such a proto-harbour, a place where ships may have stood at anchor before entering or after leaving.

Between Tafat Island and the shore, an iron anchor was found together with several broken jars, all of which are of sixth-seventh century A.D. date, suggesting the existence there of a Byzantine wreck. The survey also revealed a number of ceramic remains which range in date from the sixth century B.C. up to modern times.

A number of flintlock muskets, several lead bullets and an iron cannonball were found in the area between the islands of Ḥopami and Tafat. The existence of eighteenth-century ordnance strewn about the seabed in this area has been known since the survey carried out here by the Society for Underwater Research in 1965. At the time it was assumed that these made up the cargo of an eighteenth-century shipwreck, but no remains of the vessel itself were found. A review of the local history of Tantura, however, suggests an alternate ex-

planation for their presence. On 19 May 1799 Napoleon raised his siege of 'Akko, and retreated with his army southwards along the coast, arriving the next day at Tantura. From here he had intended to evacuate his troops by sea, but was prevented from doing so by the British. Faced with a difficult march to Jaffa, Bonaparte ordered excess ordnance to be disposed of in order to free all beasts of burden for transporting the wounded. To prevent the ordnance from falling into enemy hands, it was buried on the beach, burned and jettisoned in the sea during 21 May and the morning of 22 May. It would seem that the weapons and ammunition found during the two surveys are remnants of this action.

Ha-Ḥoterim. In the autumn of 1976 a heavily concreted Crusader sword was found in the vicinity of Kibbutz ha-Ḥoterim during an inspection dive carried out with members of the University of Haifa's workshop. Prior to cleaning, the sword was photographed at Naḥal Soreq with neutron, iridium and X-rays of varying intensity to permit a more complete comprehension of details hidden by the concretation. The sword is at present undergoing restoration treatment in the Laboratories of the Israel Museum. A preliminary study reveals that the blade is very badly corroded, but most of the wooden scabbard has been preserved (Pl. 56:E). Two extant metal attachments on the sheath were used to connect it to a belt. The wooden grip, which is in an excellent state of preservation, was secured to the pommel by tamping in a small piece of cloth and with several strips of leather.

Sea of Galilee. Extensive building operations planned in the vicinity of Tiberias prompted a series of surveys of underwater areas which will be covered by future constructions. These surveys were carried out with the aid of volunteer divers from UESI branches at Kibbutz Degania 'B' and Bet Zera' during the summer of 1978. The areas included in the survey were near Ḥof ha-Teḥelet; opposite the Plaza Hotel; and opposite the entrance to the Jewish cemetery just to the south of Tiberias and Bet Yerah.

Abutting the shore in all the sites surveyed, we found a mass of large stones which included parts of pillars and other stone architectural fragments of archaeological date. These deposits are apparently to be connected with land-moving operations of the recent past in the area of Tiberias. Beyond this rocky strip, a thick mud layer entirely covering the bottom was encountered. This mud was very soft and the slightest touch raised clouds of silt, lowering the already poor visibility (1–2 m.) to nearly zero.

The only artifact found during this survey is from the area opposite the entrance to the Jewish cemetery. It is a hollow basalt cylinder 0.50 m. long and 0.45 m. in diameter, with a small opening cut into the outer circumference of one extremity. It was found lying on its side, half buried in the mud at a depth of 7 m., with the small opening facing upwards. This artifact is probably to be identified as part of a siphon used in transporting water to Tiberias; our thanks are due to Z. Vinogradov for information pertaining to this water system.

While no archaeological remains were found opposite the Plaza Hotel, it is interesting to note that the survey revealed a number of sundry modern items including a Russian AK-47 attack rifle, a new car and several handgrenades of varying vintage.

In addition to the above activities, a *corpus* of stone anchor-like artifacts of varying proportions and shape found at Tel Bet Yerah and nearby (see M. Nun: *Sea of Kinneret*, Tel Aviv, 1977, pp. 99–101 [Hebrew]) is being prepared for publication. They are distinguished by having a single large biconical hole in their upper extremity, which in some examples has not been completed (Pl. 56:D). The size and weight of most of them precludes their ever having been used as anchors, although the smaller examples may have served in this capacity. The fact that most, if not all, of these objects were too large to be used functionally suggests that their purpose may have been cultic. While most of these artifacts are unstratified, several have been found in clear EB II context in the excavations of Tel Bet Yerah, while others appear in secondary use in a built tomb of the MB I in the area of Kibbutz

Degania 'A' (M. Kochavi: *Qadmoniot* 6 [1973], pp. 50–53 [Hebrew]). They are thus, at present, the earliest stratified anchor-shaped artifacts known in the Levant. They make up the first occurrence of what appears to be a cultural continuum in which stone anchors appear in the MB and LB strata of Levantine coastal sites, often with cultic connotations.

(Communicated by Shelley Wachsmann and Kurt Raveh)

MEETINGS

THE THIRTY-FIFTH ARCHAEOLOGICAL CONVENTION of the Israel Exploration Society marking the thirtieth year of the State of Israel was held on 17–19 October 1978 in Jerusalem, under the patronage of the President of Israel, Mr. Yitzhak Navon. The festive opening in the courtyard of the Citadel in the afternoon of 17 October was chaired by J. Aviram. Greetings were delivered on behalf of Mr. Z. Hammer, Minister of Education and Culture; by Prof. Frank Cross of Harvard University, on behalf of foreign archaeologists working in Israel; by Père P. Benoit of the Ecole Biblique et Archéologique Française in Jerusalem, on behalf of foreign archaeological institutions situated in Jerusalem; by Teddy Kollek, Mayor of Jerusalem; by Prof. B. Mazar, the President of the Society, who spoke on Thirty Years of Archaeology in Israel, and on behalf of Prof. A. Biran, Chairman of the Society's Committee. The participants also visited excavations in Jerusalem and the exhibition at the Jerusalem Municipal Museum in the Citadel. In the evening they visited the Israel Museum, where they were welcomed at a reception by the Mayor of Jerusalem.

During the mornings of 18 and 19 October, the participants were taken on excursions to sites in the vicinity of Jerusalem. In the afternoons and evenings of these two days lectures were given at the Jerusalem Theatre. The first session, with A. Eitan in the chair, opened with a lecture by D. Amiran on Changes in the Geographical Structure of Israel. The following lectures gave a concise survey of the archaeo-