DOR 87



## Excavations and Surveys in Israel 1988/89

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Area B. Work continued in the area of the metal industry uncovered in previous seasons. After the removal of late burials and of structures of the 8th-7th centuries BCE, probably belonging to the upper Israelite gate, the continuation of a room  $(2.0 \times 2.3 \text{ m})$  dating from the late 11th century BCE was uncovered in the east part of the area. A pottery chalice was found which can be added to the rich assemblage uncovered there in 1986. Two additional phases of the early occupation have been dated to the first half of the 11th century and to the 12th century BCE. The base of one of the walls in this room rests on a layer attributed to the Late Bronze Age.

Late burials and a pebble layer attributed to the Israelite gateway were uncovered in the west part of the area. The pebble-paved surface may form part of the road leading from the upper gateway to the cult enclosure in the north. After removal of part of the pebble pavement, a gravel layer of the 9th century BCE was discovered and under it the remains of a late 11th century BCE room, with a plastered floor and a doorway 0.7 m wide, were exposed. South of this room, pottery of that period was found, together with crucible fragments and stone circles used in the metal industry. Nearby an ash pit — probably a refuse pit — containing broken crucibles, worn and burnt sherds and a bone bead, was excavated. When an industrial installation was dismantled for transportation to Jerusalem for exhibition, the top of an earlier industrial installation was discovered. The pottery found in the industrial area during recent seasons includes a chalice, an incense stand, bowls, jugs and a house-shaped vessel resembling the 'snake house' from an earlier period found at Ugarit.

Area T. Work continued in the subterranean structure uncovered last season about 14 m west of the spring. Three Iron II phases could be distinguished. In the earliest phase a burnt layer was uncovered which contained contemporary jar fragments. The function of this structure has as yet not been clarified, but a few copper slags found in the burnt layer may perhaps indicate some industrial activity (kiln?). Alternatively, it can be conjectured that in the 9th-8th centuries BCE this was an entrance room to the cult enclosure.

Trial probes in the high place area and in the adjoining buildings continued to investigate the stratigraphy of the cult complex in the Israelite, Hellenistic and Roman periods.

(Communicated by A. Biran)

## TEL DOR — 1987

The eighth season of excavations at Tel Dor was conducted in July-August 1987 on behalf of the Institute of Archaeology of the Hebrew University and the Israel Exploration Society (*ESI* 6:49-53) under the direction of E. Stern and with the participation of teams from California State University in Sacramento (directed by H.P. Goldfried), the University of California in Berkeley (directed by A. Stewart), McMasters University in Hamilton, Ontario (directed by T.R. Hobbs), Saskatchewan University (directed by C. Foley), the Southern California College (directed by N. Hiderbrecht) and an independent group directed by H.N. Richardson. The staff included R. Rosenthal-Hegginbottom, I. Sharon (assistant to the director), B. Goz-Zilberstein, I. Saragosti (registrars), J. Berg (head architect), W. Maestro, W. Brainard, R. Saunders (architects), L. Banks, G. Gross, A. Kopczyk, A. Gilboa, S. Lumsden, J. Zorn, A. Stuart, A. De Groot (area supervisors), B. Adrian, R. Malik, P. Koelner, M. Beach, J. Linde, S. Ashkar, T. O'Brian, M. Shelton, K. Walker (assistant area supervisors), L. Lanigan (photographer), D. Eliahu (restorer), F. Salomon, D. Avni, S. Halbreich (artifact draftspersons), S. Dahan, K. Raveh and E. Stern (administrators). The expedition was assisted by I. Hirschberg and H. Mager of the Center for Nautical Archaeology of Kibbutz Nahsholim.

Excavations proceeded this season in the same areas as last season: Areas B1, B2 and C1 on

the east slopes of the mound; Areas D1 and D2 on the south slopes; Areas E and F in the west; and Area G at the center of the mound.

Area C1. The investigation of the stratigraphy and date of the fortifications in this area (fig. 42) continued. Last season it was established that the stone 'offset-inset' wall of the Late Iron Age/Persian period and the wall provisionally called 'the upper brick wall' were in fact part of the same wall. Thus it became clear that only two early walls existed in the area: A. the upper wall (composite stone/brick); and B. the lower brick wall. As work progressed and the section was extended southwards towards the 'seam' between the brick and stone components of the composite wall, the following stratigraphic sequence was established (from early to late): a) A sloping plaster surface covered with small stones passes under both fortification walls and extends eastwards down the slope. The potsherds sealed under this surface belong mainly to the Early Iron Age (including Cypro-Geometric ware), but earlier sherds (Chalcolithic to Late Bronze Age) were also uncovered. b) The lower brick wall was built on top of this surface. No floor which can be clearly attributed to this wall was identified. c) The composite wall was built further upslope, where the brick and stone elements were dovetailed into each other. The thick plaster glacis uncovered in previous seasons reaches the brick segment on the outside of the wall at the top of the foundations. This glacis covers the top of the lower brick wall. It was clearly shown this year that it reaches only the brick segment



Fig. 42. Tel Dor. Area C1, fortification phases

of the wall and stops about 0.3 m short of the stone segment. The latest sherds sealed in this glacis belong, at the earliest, to the beginning of the 10th century BCE. d) At a higher level, the composite wall is reached, on the outside, by a series of white plaster floors. The material sealed in these floors is of late Iron Age date (8th century BCE or even later). e) Both parts of the composite wall are supported on the inside by a fieldstone revetment. The composite wall continued to be used in the Persian period.

It remains to be established whether the lower brick wall and the upper composite wall are two separate city walls or whether the lower wall served only to support the glacis of the upper wall.

*Roman Remains.* Work continued in the large Roman building at the foot of the tell. Two building phases could be distinguished. At least in the upper phase the superstructure was of ashlar header-stretcher construction. This building probably corresponds to the latest urban stratum on the mound (Late Roman period). The finds associated with this building included a Roman drinking vessel in the shape of a dog.

Area B1. Two trial pits were dug west of the area in which Iron I-II levels were reached in previous seasons. The earliest of these levels (mid-11th century BCE) rests on the thick plaster coating attributed to the glacis of the Middle Bronze Age fortifications. This plaster surface slopes steeply westwards and was not reached in this year's excavations. On the other hand, two or three earlier phases of brick construction, which should also be attributed to an early Iron Age level, were uncovered in the trial pits. The lower phase was sealed by a clear destruction level consisting of ashes and burnt bricks; its exact date has not been determined. The earliest Iron Age strata here probably cut through the Middle Bronze Age glacis.

The excavations west of the four-chambered gate revealed for the first time a firm stratigraphic link between the gate and the habitation levels north and west of it — a floor which is attributed to the mid-10th century BCE was found cut by the gate. The date of another floor which reaches the gate from the north is still unclear.

Work in the northeast gate chamber uncovered a floor which reached the very top of the preserved walls. Under this floor the same sandy fill which was found in the southwest and southeast gate chambers was discovered.

North of the northeast chamber a wall integrated into the gate structure and continuing northwards was exposed. This wall does not seem wide enough to be part of a fortification. In the inner corner between this wall and the gate, a square brick-built surface, measuring at least 20 sq m and abutting both structures, was uncovered. Only one course of bricks has been preserved and it is not yet clear whether this is a floor or the remains of a structure.

Additional walls of the transitional Persian/Hellenistic period were exposed on the east slope, including some thick walls of header masonry. These walls attest to the existence of massive peripheral structures in this phase, which up to this season seemed to be characterized by private dwellings only.

Area B2. Work continued in the southeast chamber of the four-chambered gate and in the area south of it. Inside the gate chamber a thin layer, which includes remains of charred beams, reached the tops of the preserved chamber wall. Under this layer, the same sandy fill appeared as in the other excavated chambers. Here too, a brick surface (at least 25 sq m) abuts the chamber wall. Its function has not yet been determined.

A round stone basin was uncovered *in situ* in the south chamber of the two-chambered gate of the Persian period. A matching (though square) basin was found in the north gate chamber. A cache

of about fifty ballista stones was found southeast of the gate and next to it sherds of the Late Persian period. As yet it has not been established whether this cache should be attributed to the intermediate Persian-Hellenistic phase or perhaps to a later pit which has not been located.

Remains of the Roman period (fig. 43) have been uncovered in two areas: the continuation of the street leading westwards from the entrance to the city and on both sides of the street leading southwards from it. The excavations exposed the north wall of the colonnaded building situated southwest of the gate along 35 m, without reaching its north end. The southeast corner of the building was uncovered in the south part of the excavation area. Here it was found that the pavement of the north-south street continues westwards, perhaps representing a junction with an east-west street or with a 'piazza'. A courtyard or a terrace with various installations separates the building from the east-west street. Two main building phases could be distinguished in the



Fig. 43. Tel Dor. Area B2, plan of Roman remains

building. The later phase was accompanied by changes in the secondary street system: the corner of a large building rested on the pavement of the earlier street or 'piazza' and the east-west street was shifted slightly to the north and repaved (this time with plaster) at the expense of the courtyard which had earlier divided the paved street from the colonnaded building. This is the first evidence for the existence of two phases of urban building in the Roman period, at least in this part of the town.

Excavations were resumed in the rooms east of the north-south street and it is now clear that they form the façade of a large building with a courtyard extending eastwards. The rooms open onto the courtyard, but only one of the excavated rooms also opens onto the street, and must have served as an entrance room wide enough to allow the passage of chariots. It had molded doorjambs; the chariot tracks and the door socket have been preserved in the pavement of the entrance room and the tracks continue in the street (fig. 44). The function of this building has not yet been determined; it may have served as a *khan* or a storehouse.

Area D1. An attempt was made to clarify the nature of the transition between the Iron Age and the Persian period in the south part of the area. The lowest Persian level consists of an open space with scattered fragments of *kurkar* floors and pits, without any architectural remains. The fill under this level produced mixed Iron Age and Persian pottery, without any possibility of isolating clear Iron Age contexts.

The excavation of the purple dye installation uncovered last year in the east part of the area continued. As expected, the lime channel of the installation leads to a pit which was full of ashes and dye residue. The pit was unlined and no container was found in it. Two semicircular stone-lined pits were uncovered nearby, at a higher level. As yet, it has not been established whether these pits are connected with the installation.

The monumental Persian hall with a central pillar and very thick walls (tower?) uncovered in previous seasons was found this year to represent only part of a more complex structure.



Fig. 44. Tel Dor. Area B2, entrance into Roman structure south of gate

A series of consecutive oblong rooms was exposed in the Hellenistic and Roman strata. Two building phases could be distinguished. Some of the walls are built entirely of fieldstones, while others incorporate short monolithic pillars in the fieldstone masonry. Some of the walls rest on the walls of the Persian monumental building. At least the earlier phase of these buildings seems to be earlier than the north-south Roman street exposed here in the past, as one of the walls of that phase is cut by the sewer running under the street. The excavation of the street continued northwards and showed that it did not lead, as was expected, to the sacred precinct (Area F), but made a sharp turn to the west (to a gate?).

Area D2. Six new squares were opened in the north of this area, continuing the squares opened last season.

A number of well-preserved walls of the Hellenistic period, built of alternate ashlar piers and fieldstones, were uncovered. These belong to a series of rooms north of the east-west street exposed in previous seasons.

At least two distinct Roman phases were identified. In the lower Roman phase, the continuation of the large building excavated last year was uncovered, consisting of an ashlar-paved courtyard and rooms on three or four sides. Remains of a stone staircase leading to a second story were exposed in the courtyard. The south façade of the building faced the east-west street and at least one entrance led from one of the south rooms into the street. The walls were of ashlar masonry, partly incorporating the remains of Hellenistic walls.

The later Roman phase consisted of one large, seemingly isolated building, constructed of large ashlars on thick cement foundations. This building also preserved the earlier street line. Undoubtedly, this was a public building, but its function is as yet unclear.

A series of small rooms built of fieldstones was uncovered in the northeast part of the area, but the stratigraphic connection with either of the Roman phases has not been determined.

Area E. Wall fragments of Iron II and Persian and Hellenistic periods were exposed here, but they still do not form a coherent plan.

Two main Roman structures were uncovered: a) A large, apparently public bath, of which two consecutive rooms were exposed, both containing hypocaust columns built of clay tiles. The central columns are rounded, while those adjacent to the walls are square. In the larger room the floor above it (*suspensura*) was additionally supported by low partition walls built of square clay tiles (fig. 45). b) A vaulted building, whose façade was exposed in the south of the area. It was fronted by a small, ashlar-paved courtyard, with a cylindrical plastered basin in one of the corners. A drainage channel under the courtyard led westwards down the slope.

Area F. When excavating a deep probe along the Roman *temenos* wall, a thick conflagration layer was reached, containing potsherds tentatively dated to the second half of the 11th century BCE, that is, later than the burnt level in Area B1. Above this layer, late Iron Age sherds were found, including Assyrian ware. No architectural remains of these periods were discovered.

Work was concentrated in the strip between the early Roman street and the *temenos* wall, with the aim of clarifying the date of the temples excavated by Garstang in the twenties. A sounding along the east face of the *temenos* wall yielded Roman sherds which probably belong to the foundation trench of the wall. These consisted mainly of body sherds of store jars and a Roman imperial oil lamp. This evidence confirms the late date for the temples, as suggested during the last season.

A row of rooms of the Hellenistic period was uncovered west of the early Roman street, some

#### Maritime Archaeology - 1987/1988

#### NORTH BAY

Storms in the winter of 1987/88 exposed many archaeological remains in the north bay of Dor. A detailed survey was conducted on behalf of the Department of Antiquities and the Tel Dor Expedition of the Hebrew University by K. Raveh, Y. Hershberg and S. Kingsley.

The remains of an ancient quay oriented north-south were exposed along about 50 m contiguous with the shore (fig. 46). The quay extends to the ruined structure in the south corner of the bay, reaching it at a right angle. Two large mooring stones (height 1.0 m, diam. 1.1 m) with square perforations  $(0.2 \times 0.2 \text{ m})$  stand on the quay at a distance of 25.0 m from each other. At its north end, the quay turns west underwater towards the bay's center. At its end are the remains of a monumental building, with large marble columns. Remains of about a dozen marble columns were recorded in the quay area, as well as parts of *kurkar* columns of the type known in the Dor temple. The building remains and the distinctive mooring stones should probably be attributed to the Roman period.

The finds from the seabed of the bay included the hand of a larger than life-size marble statue and three perforated anchors (one of marble). The pottery consisted mainly of fragments of Roman and Byzantine amphoras, plates of the Crusader period and several jar handles of the Persian period.

These discoveries are the first evidence for the existence of a harbor in the north bay of Dor. (Communicated by K. Raveh)



Fig. 46. Dor. North bay

#### SITE K-60

Earth-moving development works carried out on the seashore, about 2 km from Tel Dor, damaged a site known as K-60 (map ref. 1423-7/2228-9). In 1988 a survey and salvage excavation were conducted by the staff of the Center for Maritime and Environmental Archaeology in Nahsholim, supervised by K. Raveh and B. Guz-Silberstein, and assisted by Y. Hershberg, P. Wolff, S. Kingsley and volunteers.

The development works destroyed the northwest side of the site and exposed strata down to bedrock. The salvage excavation was carried out in the northeast part of the site. The remains exposed included a *kurkar*-paved floor with a *tabun* on it, and a layer, containing clay, olive pits, bones and copper slags, above it.

Of special interest among the finds (not in situ) are fragments of grey-burnished ware from Early Bronze I, a piece of a clay horn of the kind decorating Chalcolithic ossuaries, numerous ledge handles, a few lug handles and sherds of holemouth jars with plastic decoration. Large basalt bowls of a quality similar to those found in the Beersheba culture were also found. The flint tool assemblage also indicates that the occupation of the site should be dated to the Chalcolithic and EB I periods.

Several tombs, some of them ruined, were discovered west of the excavated area and were examined by P. Smith and L. Horowitz of the Hebrew University. The tombs were built of fieldstones and oriented east-west. The deceased were laid on their right side. Pottery vessels, coins and jewelry dating from the Islamic period lay next to them.

(Communicated by B. Guz-Silberstein and K. Raveh)

## 'EN GEDI

Recently, several salvage excavations were carried out in the 'En Gedi area on behalf of the Department of Antiquities. The work was directed by G. Hadas, assisted by young people interested in archaeology from the 'En Gedi High School.

A salvage excavation in the summer of 1986 near the Nahal 'Arugot aqueduct exposed the eroded remains of a tomb containing three wooden sarcophagi. The wood had decayed and only its imprint in the clay remained. Two of the sarcophagi contained the skeletal remains of a number of people while the third, which was smaller, was used for bone collection. Nearby, fragments of a cooking pot, a juglet and a grooved lamp, all dating from the 2nd-1st centuries BCE, were found.

In the autumn of 1986, a salvage excavation was carried out near Nahal David, after a tractor severely damaged a tomb with *kokhim*, leaving only one wall with two *kokhim*. The first *kokh* contained the imprint of a wooden sarcophagus in which the bones of several persons had been buried. In front of it stood an empty stone ossuary. In the second *kokh* an imprint of a wooden sarcophagus was also preserved, which had contained the primary burial of an adult and a child. Behind it was the imprint of a wooden ossuary used for bone collection. Above the remains of the wooden sarcophagus stood two complete cooking pots. A partial imprint of another wooden sarcophagus, as well as potsherds from the 2nd-1st centuries BCE, were found on a narrow strip in front of the *kokh* openings.

In the winter of 1987, a trial excavation was conducted at the entrance to a cave near the 'En Gedi spring. Many fragments of pottery vessels with flat bases and thin rims, as well as some cornet bases, were found, all belonging to the Ghassulian culture of the Chalcolithic period.

In the spring of 1988, after a cloudburst had exposed additional parts of the Nahal 'Arugot aqueduct, a salvage excavation showed that at this spot the aqueduct crossed a small spur in a tunnel. Nearby two tombs were uncovered, which contained wooden sarcophagi in various states of preservation. All were used for primary burial. A few potsherds and wooden utensils of the 2nd century BCE were also found.

(Communicated by G. Hadas)

#### 'EN HANASIV - 1986/1987

Two additional seasons of excavations were carried out in Burial Cave No. 134 (map ref. 1977/2095) at 'En Hanasiv (*ESI* 4:26–28) in August 1986 and August 1987 by R. Amiran and M. Sebanne of the Israel Museum in cooperation with anthropologist P. Smith of the Hebrew University. Z. Kahana, P. Sabari, L. Horowitz, A. Luft, I. Sebanne and volunteers participated in the work.