

Dor Coast

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An underwater survey was carried out from June to October 1991 in the harbor at Dor (from the shore to longitude 14200 and between latitudes 22300 and 22547) on behalf of the Center for Maritime and Regional Archaeology. The work was directed by K. Raveh and S. Kingsley, with the participation of D. Avni (draftsman and administrator), and S. Reuven, M. Lufan and S. Rontal (divers).

The survey was conducted following severe erosion in the area of the south entrance to the ancient harbor at Dor. The remains of nine ships were discovered in the investigated area (diam. 85 m); of these four were dated to the mid-17th century CE and at least four of the other five were attributed to the Byzantine and Early Islamic periods (6th–early 8th centuries CE). The ships, which were identified at a depth of up to 2.20 m, probably sank when they encountered sandbanks while seeking refuge behind the chain of islands south of Dor.

The early remains are characterized by ballast stones, mixed with potsherds and wood fragments. The largest concentration of finds was located in a long mound (8.90 × 22.30 m) of ballast stones oriented north–south. Among the roughly hewn stones of different sizes (length up to 0.50 m) were several smoothed blocks (0.25 × 0.80 m), which were concentrated on the northeast side of the mound. Boulders of magmatic rock scattered over an area of c. 4.00 × 7.00 m south of the mound may have formed part of the cargo of another ship.

Fragments of local amphoras of the Byzantine period were collected on the mound and south of it. A tiny bag-shaped amphora and a bent sword found on the mound indicate a date between the Persian invasion (614 CE) and the mid-7th century CE. The finds also included a lead ingot and a copper pitcher and lid, both of which were composed of several parts with serrated joints. A wooden board with a mortise and tenon joint at its end is the only part of the ship which was preserved.

Another concentration of finds (4.50 × 6.00 m) contained well-preserved cypress (*Cupressus sempervirens*) boards which had formed part of the ship's body. The boards were joined at the ends by mortises and tenons at intervals of up to 31.8 cm, indicating a date earlier than the 6th century CE. However, unlike the Roman method, the tenon placed in the mortise was not of wood but was a T-shaped metal element. A few fragments of bag-

shaped amphoras and three stone anchors with a single perforation were also recovered in this pile.

A third concentration of finds (4.80 × 5.90 m; depth 1.80) included two kinds of ballast stones: fieldstones (0.15–0.26 × 0.16–0.45 m) of white rock and decomposed limestone ashlar (c. 0.25 × 0.58 m), which lay on a northwest–southeast axis. A long stone anchor (length 0.61 m) with a single perforation was found on the same axis. The finds included a fragment of a gray pithos, four types of 7th century CE Byzantine amphoras, a crushed copper pitcher, an iron hammer and dozens of iron nails, as well as a well-preserved wooden rigging block (9.6 × 17.5 cm; thickness 4.1 cm).

The fourth concentration, which is firmly dated to the Byzantine period, was composed of well-



Fig. 39. Dor Coast. Greek bronze helmet.