

THE PUNIC PROJECT AT CARTHAGE

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The second season of the Punic Project, under the auspices of the American Schools of Oriental Research, was funded by a generous grant from the Smithsonian Institution and by contributions from the two sponsoring institutions, the Harvard Semitic Museum and the Oriental Institute, and from private donors. Professor Frank M. Cross continued as Principal Investigator; I am Field Director. Field and laboratory staff numbered twenty-five. We concentrated our field efforts west of the Rectangular Harbor and in the "Tophet," the burial ground of sacrificed infants (east of the Kelsey excavations of 1925).

At the harbor site our objectives for the season were to locate the Roman and Punic quay walls, to date the various harborside con-

structions, and to determine their function and their relationship to the Tophet. In the Tophet itself we wanted to define its eastern limits and to refine the stratigraphic sequence. By carefully excavating and examining the contents of burial urns found in the Tophet, we hoped to understand more clearly the nature of child sacrifice. With the exception of locating exactly the Punic quay wall, all of our objectives were met during our eight weeks (April 5-June 2) in the field.

Recent excavations by the British in the Circular ("Military") Harbor and our work on the west side of the Rectangular ("Commercial") Harbor have demonstrated as decisively as archeology can that these were the Punic ports described by Appian. Pottery collected from sealed deposits along the quayside indicates that the Rectangular Harbor was built between 400-350 B.C. Where the earlier Punic port facilities were located, if in fact there were any, remains unknown.

The Punic quay wall must be some 40 m. west of the present shoreline of the lagoon and less than 30 m. from the eastern limits of the Tophet ("Tanit 2"). The approximate location of the quay wall can be deduced from the levelling fills just above bedrock that were probably laid in behind the Punic quay wall. In Area B2 these horizontal bands of fill were 0.20-0.50 m. above the present sea level and were definitely not under water during the 4th-2nd centuries B.C. Just 12 m. to the east in Area E1 there were no traces of quayside fills; bedrock was 1.75 m. below sea level; a thick deposit of homogeneous clay, 1.50 m. deep, had accumulated above the bedrock. Part of a wooden punting pole stood upright in the clay. The clay sediment had settled slowly in an environment of slow-moving water. Clearly we were inside the basin of the Punic harbor. Its floor was not lined with stone blocks, as some scholars have maintained, but made of calicheated sand, the natural bedrock of the area. Prior to the harbor, a quiet lagoon or marsh covered the site.

The harbor clays hermetically sealed organic remains from the Punic period and preserved them in remarkably good condition. When analyzed the many wood fragments should provide important evidence for the kinds of trees growing in the region and commercially exploited by the Carthaginians. From the hundreds of seeds and bones buried in the harbor, we have been able to confirm many of the claims that Mago made for Carthaginian agriculture and husbandry in his treatise, partially preserved by classical writers. Of the plants clearly attested we recognized wheat, barley, olives, grapes, figs, and pine cones; many others must await identification by our paleo-

botanist. Punic animal remains include sheep, goats, cattle, pigs (wild and domesticated), cats, frogs, and dogs. Dogs were numerous and perhaps eaten by the Carthaginians. Darius, the Persian king, is said to have instructed his envoys to admonish the Carthaginians to stop sacrificing children and to abstain from eating dog meat.

The Roman period was marked by a great increase in pork, as wild boar and domesticated swine became the dominant species represented in the sample. No camel remains were found before the Byzantine period.

The Roman harbor was in use from the 1st-early 6th centuries A.D. It was 0.75-0.85 m. deeper than its Punic predecessor, but probably narrower, since the Roman quay wall was erected at least 15-20 m. east of the Punic quay. Rebuilt three times, the Roman quay wall was a massive structure made of well-cut sandstone blocks. It was preserved 7 courses high, almost 3.50 m. from top to bottom. The lowest course was founded slightly below the sandy bedrock that served as the harbor floor.

For 15-20 m. beyond the Punic quayside, the Romans filled in the harbor above the thick clay deposit with Late Punic rubble from 3rd-2nd century B.C. buildings once located along the Punic port. Over this destruction debris they poured a thick layer of plaster to form the earliest Roman quay (probably Augustan), then erected the huge quay wall farther east. This operation helps to explain the gap in the stratigraphy from ca. 400/350 B.C. until the Roman period that we detected last year beneath the Vaulted Building. All of the Late Punic material had been hauled east and used to fill in the western side of the Punic commercial harbor when the Romans remodeled the port.

The Roman quay was leveled up another half meter in the time of Hadrian and plastered over once again. The harbor front was characterized by an extensive plastered platform that extended from the quay wall toward a building with *opus signinum* flooring, probably a warehouse that preceded the Vaulted Building.

The Vaulted Building, 28 m. west of the quay wall, was erected ca. 400 A.D. The loading zone was raised another half meter. Flagstones paved the area between the warehouse (Vaulted Building) and a north-south terrace wall with a plaster-lined drain at its foot. A line of rectangular footings for column bases ran parallel to the terrace wall and drain. Just 3.50 m. east of the column foundations was a similar boulder and mortar footing for a parallel wall. Many of the mortared boulders had been left intact. A rough plaster pavement—the third

and latest on the Roman quay—covered the area between the wall and the row of columns.

For this phase of the Roman harborside we suggest the following reconstruction: Behind the quay wall was an arcade, or colonnade, running north-south. The colonnade was probably roofed over, with a slight pitch downward from the wall (with boulder foundation) to columns. Thus the north-south drain at the foot of the terrace wall served not only as a conduit for drains leading in from the west but also as a catchment for roof runoff from the colonnade. Between the colonnade and the Vaulted Building the flagstone pavement provided a sturdy surface for hauling cargoes to and from the dockside.

In the Byzantine period, between ca. 550-650 A.D., the Roman quay wall and the harbor installations were no longer used. A series of pottery kilns lined the harbor. For 15 m. or more east of the Roman quay wall, the harbor was filled in; the upper layers of this debris were waste heaps from the kilns. Unless a Byzantine quay wall is found farther east, we must conclude that the harbor ceased to function as an active port and became an industrial area for pottery production.

Late Roman building activities destroyed much of the latest phase of the Precinct of Tanit ("Tanit 3," according to Kelsey/Harden terminology). Foundation vaults, similar to those near the harbor (4th/5th century A.D.), and Kelsey's so-called "Saturn Temple" are two of the most conspicuous late structures. We found only two cinerary urns and no stelae that had survived from "Tanit 3."

From the middle stratum ("Tanit 2") the burials were well preserved. In an area of no more than 5 square meters we discovered sandstone cippi and 35 jar burials densely packed into this limited space. Unlike Harden's discoveries farther west, where "Tanit 2" urns were at least a meter above bedrock and "Tanit 1" jars covered with cairns were placed on bedrock, we excavated urns of the middle phase that had been buried on or near bedrock. Some of these "Tanit 2" urns had crude cairns built over them to hold them upright. It would appear that the eastern limits of "Tanit 1" did not extend so far east as "Tanit 2" which bordered the Punic harbor some 30 m. from the water's edge. Perhaps "Tanit 2" should be subdivided into at least two phases. The earlier level contained miniature sandstone cippi which were superseded by much larger monuments. The latter were often covered with white stucco and painted various colors.

During the final days of excavation we found some evidence which perhaps explains in part why the Commercial harbor was built so

close to the Tophet burial grounds. At the bottom of the Punic harbor lay a huge sandstone cippus. It had been brought to Carthage by barge from the Cape Bon quarries. The sandstone monument rested on a large well-hewn wooden beam. Unfortunately we were unable to complete the excavation of the carved cippus this season. Until next year we may speculate that the stela rests on the remnants of a barge that sank in the harbor before the monument could be unloaded and erected in the nearby Tophet.

Our study of the contents of 5th-4th century B.C. cinerary urns, of which more than 40 were excavated this season, has produced the following preliminary results: The oldest children sacrificed were 3-5 years old; the youngest were stillborn or aborted fetuses; the majority, however, were between the ages of 1½ and 2 years old. There was an attempt to include all, not just parts, of the sacrificed infant in the urns. Most of the urns had two individuals in them; one contained three children. Four burial urns contained human plus animal remains. Goat was clearly attested in two of these; bird bones were found in two others. While it is difficult to distinguish in many cases whether a sheep or goat was sacrificed, the latter was clearly attested in some examples. In one urn, only goat bones (charred) appeared, suggesting that that animal had been substituted for the child sacrifice. In 5 of the 40 urns excavated, necklaces were included in the burial offering. Beads and amulets of gold, silver, bronze, amber, faience, ivory, bone, and steatite were found. When studied more thoroughly, the charcoal should give us some indication of the fuels used to burn the babies. Degrees of calcination on various parts of the bones suggest that the children had already been slain before the fires engulfed them. Gradations of charring on both inner ear bones of the children indicate that the infants lay on their backs, quite motionless, while the sacrificial fires consumed them.