

Trude Dothan

Deir el-Balah: The Final Campaign



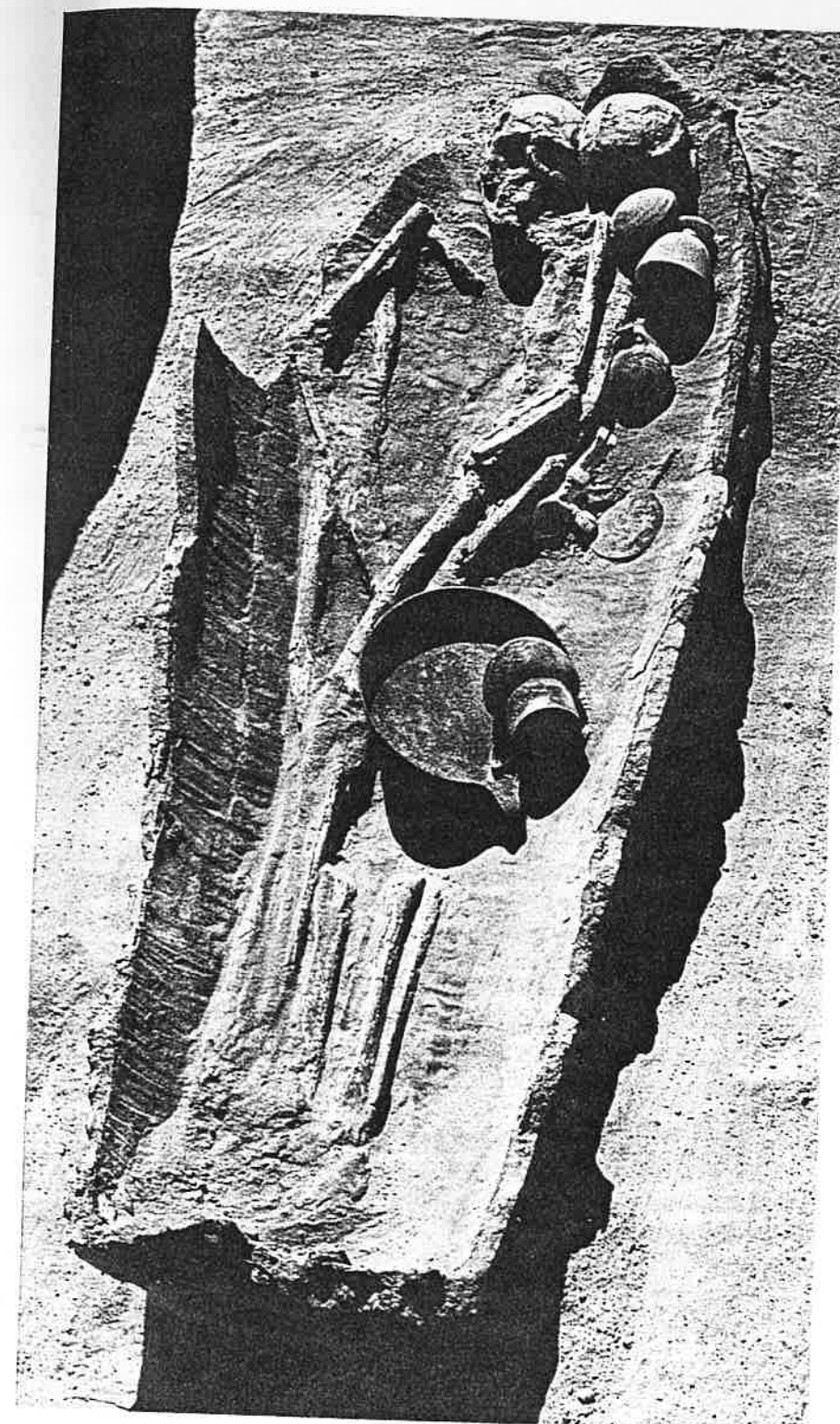
Excavations at the site of Deir el-Balah in the Gaza Strip uncovered a Late Bronze Age cemetery rich in anthropoid coffins and burial gifts. The large settlement associated with the cemetery served as one of the Egyptian strongholds along the Via Maris (known in antiquity as the Ways of Horus). Excavation of the settlement disclosed six major strata and one intermediate phase, dating from the second half of the 14th century B.C.E. (the Amarna period) to the Byzantine period. In accordance with an agreement with the landowner, the cemetery and the settlement were filled in and reclaimed for agricultural use on termination of the excavation.

Background

Deir el-Balah presented unique problems for excavation. The land, privately owned, was covered by sand dunes 13 m high. In exchange for the removal of the dunes and the reclamation of the land, the owner agreed to allow excavation of the site. Since the excavated area was to be filled and returned to agricultural use at the end of 1982, the following urgent goals were determined for the 1980 to 1982 seasons: to determine the extent of the cemetery and to further examine the burial customs; to try to determine the extent of the settlement; to define and refine the stratigraphical sequence, and to understand the architectural features of each occupational level; to investigate thoroughly the nature of the man-made pond; and to conduct sedimentological studies of clays, bricks, and pottery to determine makeup and provenance.

The site of Deir el-Balah is located 1.5 km east of the Mediterranean shoreline in the Gaza Strip at Israel grid coordinates 08630 and 08990. Between 1972 and 1982, 15 seasons of excavation were conducted. They produced a comprehensive picture of a settlement with occupation levels from the Late Bronze (LB) to the Byzantine periods and an associated LB cemetery. The LB strata were the most prominent and became the focus of the excavations. The Late Bronze Age was a cosmopolitan era marked by the mixture of cultures, international trade, and commerce. The architectural features and the material finds of the LB strata point to the predominately Egyptian character of the settlement at that time and reflect the international character of the age. The extensions of occupation into the Philistine, Iron, and Byzantine periods, though extremely important for the history of the site, were much less substantial.

This is the first time in the history of Palestinian archaeology that a site



Tomb 118 after opening. It contained the skeletons of a man, aged 35 to 40, and a woman, aged 25 to 30. The burial gifts found in the coffin included a bronze jug and platter, an alabaster spoon and goblet, a mirror, jewelry, and pottery flasks.

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hidden beneath deep accumulations of recent sand dunes has been explored—a breakthrough in excavation technique. Heavy earth-moving equipment removed sand until an area of some 2000 m² had been excavated down to occupation level. The agreement with the owner stipulated that the land be returned for agricultural use after excavation. At this time, both the cemetery and the settlement have been reclaimed, filled in, and planted. The only records remaining of the excavation, therefore, are those made by the excavators.

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Results

The Cemetery

The cemetery, extremely rich in coffins and material finds, seems to have been in use from the 14th century B.C.E. to the last phase of the Late Bronze Age. This dating is confirmed by a seal of Ramses II and scarabs of the Ramesside age (13th century B.C.E.) found in situ in the tomb excavations. The finds reflect the cosmopolitan nature of the period. However, the Egyptian element again predominates, as attested by the custom of burying the dead in anthropoid coffins, as well as by the stelae and associated objects.

The excavation of Deir el-Balah began in the cemetery after it became apparent, through the appearance of coffins and grave goods in the antiquities market, that a rich LB cemetery was being excavated illicitly. A concerted effort was made to catalogue, photograph, and analyze material that had surfaced through the dealers into private collections and museums. But, as there had been no systematic excavation in the cemetery, it was not possible to link these finds to specific coffins. Following the removal of the sand dunes, a salvage excavation and survey of the area was undertaken in order to determine the extent and nature of the cemetery and to investigate the diverse burial customs and associated finds. Four anthropoid coffin burials and about 50 simple burials were excavated in situ. In the final seasons, areas to the northwest, southwest, and southeast of the cemetery, bordering on the dunes, were opened in an effort to determine its extent. In each area the cemetery continued under the sand dunes, and the boundaries hence remain unknown.

Burials

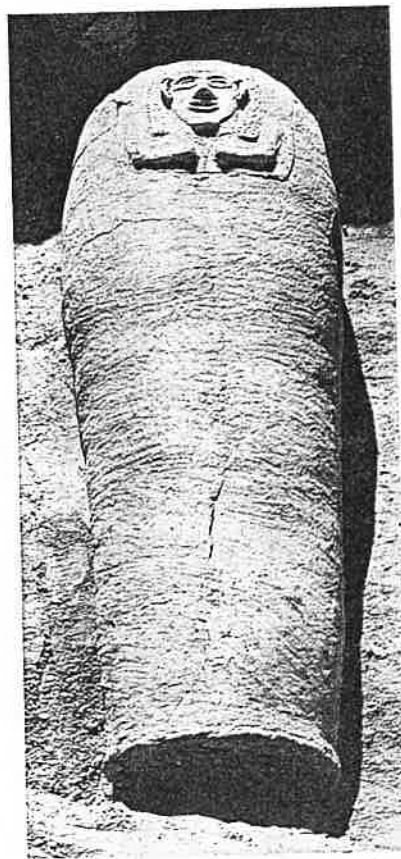
The coffins were found in groups of three or more, 3 to 4 m apart, with simple burials between them—following the known pattern of anthropoid burials. Both the coffins and the plain burials were marked by a storage jar at the head. Each anthropoid coffin contained the remains of several individuals. The intriguing question of the reason for simultaneous multiple burials has yet to be answered.

The coffins were found in tombs cut roughly into the *kurkar* (natural coastal sandstone) or in *hamrah* (red sand). All were oriented, more or less, to the west—i.e., to the Mediterranean Sea. The graves were rectangular in shape, sloping inward, and were slightly rounded at the head, following the outline of the coffin.

Coffins

The cemetery has yielded the largest and richest group of anthropoid coffins so far known from Canaan. Approximately 50 anthropoid clay coffins have been discovered so far, four of them found in situ, with their accompanying assemblages.

The cylindrical coffins range in height from 1.6 to 2 m, with a circumference of about 1.7 to 2.2 m at the widest part. They taper toward a rounded or square, flat base which in some cases protrudes to accommodate the feet. The upper part is closed by a removable lid on which the facial features, wig, arms, and hands of a man are modeled in high relief. The lids are from 40 to 90 cm high and from 50 to 80 cm wide. The lid is equivalent to the face or bust and does not extend down to the base (as in the stone or wooden prototypes, or in later developments of the pottery coffin).



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Anthropoid coffin, shown open on preceding page.

The coffins were built up by the coil technique, often used in making large vessels. The lid was cut out of the leather-hard clay before firing and hence fits the opening perfectly. In some cases a row of small round holes was pierced along the back and a round opening cut in the base to allow drainage of body fluids. All of the coffins are very large, brittle, and difficult to transport and were thus made locally, as has also been proven by chemical analysis of their material by I. Perlman. The coffins were fired in an open fire at a low temperature that would account for the sometimes crumbly and mottled material. Without doubt, however, far greater care was devoted to the firing and finish of the lids than to the bodies. Many of the lids may have been fired separately at a higher temperature. In a few cases, traces of paint survive on the coffins.

The coffin lids differ very much in style, technique, shape, and workmanship. The group excavated (Tombs 114, 116, 118, and 301) suggests that lids of diverse types can be more or less contemporaneous and that differences in type do not necessarily indicate a difference in time. Two basic iconographic approaches can be seen in the face-lids; for convenience we use the terms "naturalistic" and "grotesque." At Deir el-Balah the naturalistic type is dominant.

Some coffins, so similar as to be almost identical, were surely made in the same workshop, or even by the same hand. Some of the coffins are without parallel and are superior to any other pottery coffins known from Canaan or from Egypt, the home of this burial custom.

Burial Gifts

The vessels and objects from the cemetery at Deir el-Balah are among the richest and most varied ever found in Israel. However, the finds are still dispersed and probably not all of them have been traced. They parallel and complement what was found in our excavation, which showed us how the objects were arranged in and around the coffins or in association with plain burials. The grave goods include:

- Four Egyptian burial stelae, one found in situ, made of kurkar with hieroglyphic inscriptions and depictions of Mut and Osiris, paralleling 19th-dynasty stelae from Deir el-Medina in Egypt.
- Jewelry of carnelian and gold, carved in dominant Egyptian shapes (the lotus seed, the "Horus eye," the god Bes).
- Scarabs—a very large group including royal scarabs of the 19th and 20th dynasties.
- Alabaster vessels—an outstanding group ranging from cosmetic bowls and jars to large, composite vessels.
- Pottery—both plain, crude local ware and a diverse assemblage of imported wares: Mycenaean IIIA and IIIB stirrup jars, pyxides, and large pyriform jars; Cypriot milk bowls, base-ring-ware jugs, and white-shaved juglets; Egyptian New Kingdom handleless bag-shaped jars; "flowerpots," high-necked jugs and flasks, and tall, white-slipped, bulging-necked jars.
- Bronze objects including a wine set (jug, strainer, and bowl), razors, and cast knives.

The Settlement

The second phase and goal of the excavation focused on finding the settlement associated with the burial ground in order to establish a comprehensive picture and history of the site. The settlement was discovered in 1977 and major excavations were conducted from 1977 to 1982, with subsidiary work continuing in the cemetery. The primary goals were to uncover the settlement and its different levels of occupa-

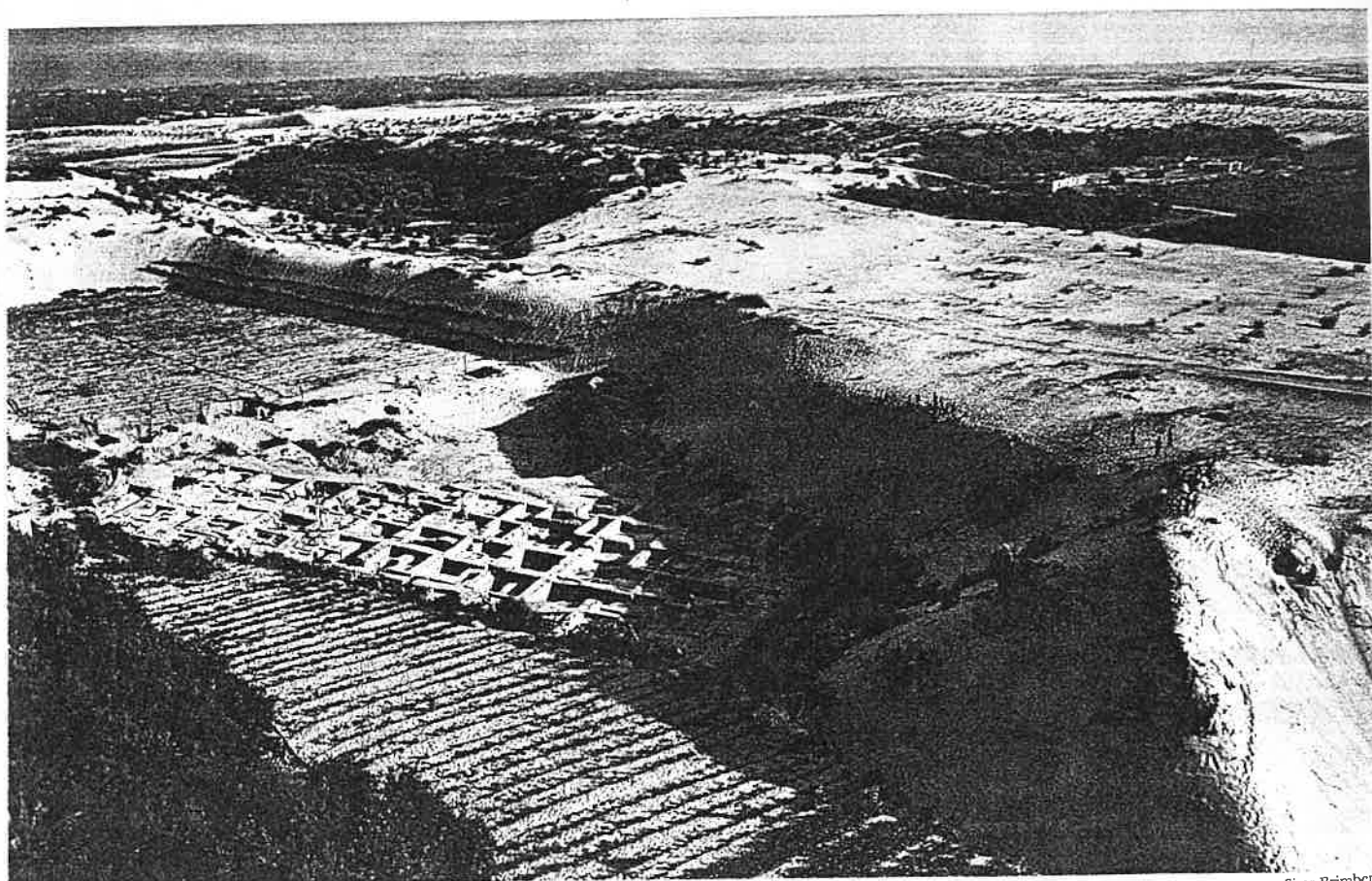


Sisse Brimberg

Carnelian seal from Tomb 116. The Egyptian king, wearing the Blue Helmet with the uraeus and tassel attached, stands on a chariot. In front of the horse stands a servant(?). The reverse side of the seal portrays the three gods Min, Horus, and Amon and bears a hieroglyphic inscription with the name of Ramses II, whose period is well represented in our cemetery.

tion; to determine the identity and background of the inhabitants; to locate the artisans' quarter associated with the production of the coffins and the grave goods; and to place the settlement and the cemetery in the geographical and historical framework of Canaan in these periods.

Although the nature of this settlement is now clear, it was only obtained through painstaking labor. The team faced the difficult task of tracing unbaked mud bricks. The walls had no stone foundations. Because of the light color of the sandy material composing the bricks, the seams between them would appear upon initial uncovering only to vanish as the sun rose higher. This problem required the development of special techniques and sensitivity to the material worked with. *Lesh-pachtel* (a hebraized form of the German word for "putty knife") was the key. This entailed hours of scraping and cleaning in the hot sun, trying to trace the bricks before they disappeared. Early morning light, just as the sun rose, and later afternoon sun were discovered to be the best in which to see the bricks. The bright noontime sun reflected off the sand, and only had the effect of bleaching out the colors of the unfired mud bricks, making them next to impossible to discern. A brick was marked and



Aerial photograph of the site. On the upper right, the area of the cemetery, now covered by guava plantations. In the center, the settlement at the time of excavation surrounded by the sand dunes which had accumulated after the Byzantine period. On the left, orange groves.

drawn on the plan only after three witnesses confirmed its existence. The following are the major strata (St.) discerned in the settlement, although in almost all of the strata multiple phases were observed.

- St. 1—Byzantine period
- St. 2—10th to 9th centuries B.C.E.; Israelite period
- St. 3—12th to 11th centuries; Philistine period
- St. 4—second half of the 13th century; Ramses II
- St. 5—first half of the 13th century; Seti I
- Intermediate 6–5—end of the 14th century

St. 6—second half of the 14th century; Amarna period

Stratum 6

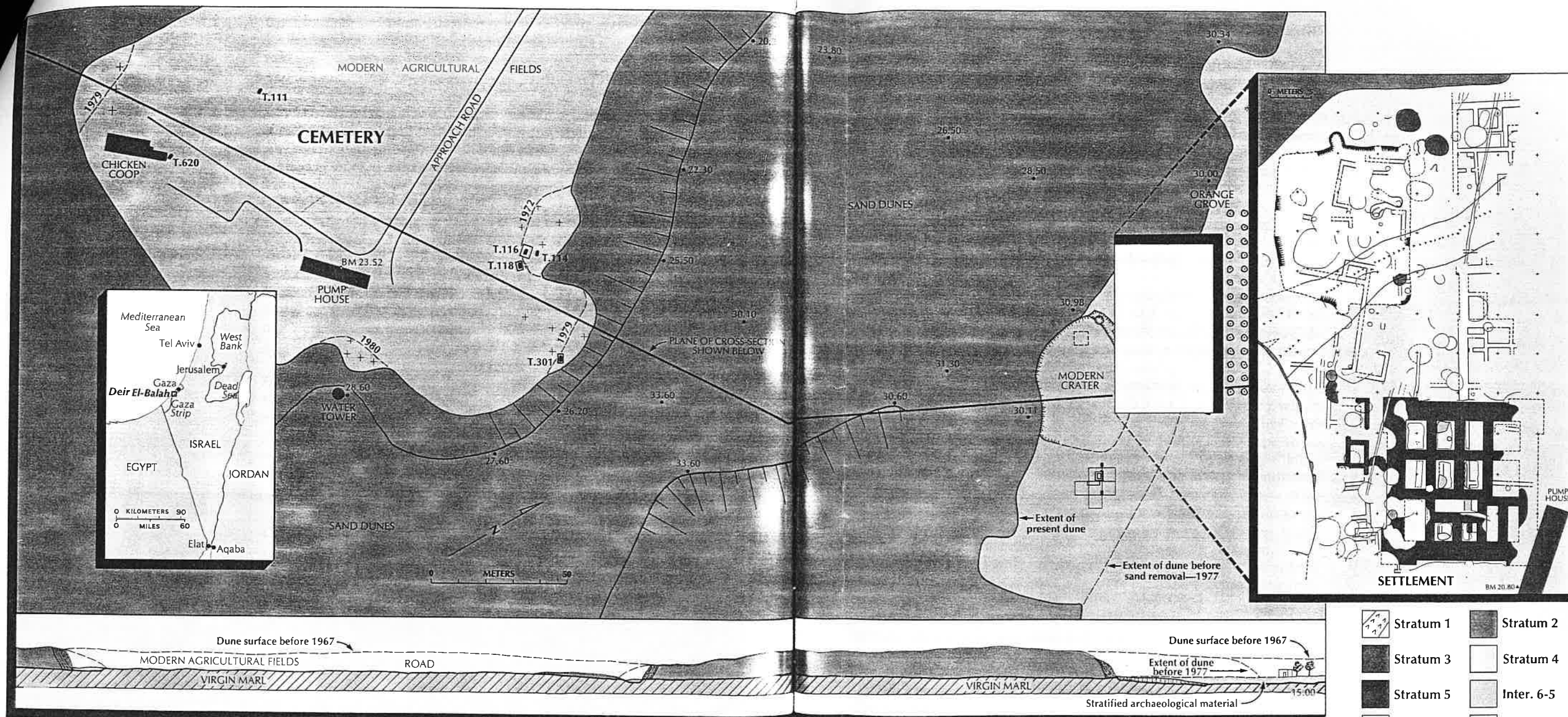
St. 6 was founded upon virgin soil and hence is the earliest level of occupation at the site. A large residence built around a man-made pond and similar in design to building complexes of the Amarna period in Egypt was excavated. This relation of building to pond in conjunction with the specifically diagnostic finds of St. 6 point to the Egyptian background of those who built the first settlement during the second half of the 14th century B.C.E.

The large man-made crater-pond is square, measuring approximately 20 x 20 m. The boundaries of the crater have been traced and partially defined on all four sides. The quarried sides slope steeply into the virgin marl to a depth of 5 m. Both archaeological observation and geological investigation confirm that the crater is man-made. Since many mud bricks from the buildings had been formed from the same marl as the crater, it seems that the crater served as a quarry, at least in its initial phase. After the marl had been quarried, the crater served as a water reservoir (both in St. 6 and through St. 5). The usage of the crater as a pond or reservoir is confirmed on the one hand by the hydrological investigation and on the other by the known building pattern of the Amarna age (to which St. 6 is dated) in which building complexes were designed adjacent to a pond or lake. Afterward the reservoir was filled with debris—multiple layers of ash and clay mixed with huge quantities of broken pottery as well as many small finds. The presence of large quantities of animal skeletons and bones in the debris will provide an added dimension to the understanding of both the nature of the fill and of animal husbandry in the LB period.

The Amarna residence was composed of three mud-brick buildings set at right angles (two running north-south and one east-west). The two buildings running north-south together measure approximately 50 m in length and contain the remains of as many as 15 rooms. The single east-west building measures approximately 20 m in length and contains at least four to five rooms. The buildings border the pond on its eastern and southern perimeters. The northernmost and westernmost boundaries of this building complex are as yet undetermined as they continue under the sand dunes. These buildings are probably part of a larger settlement.

The westernmost wall of the two buildings to the east of the pond (i.e., the two north-south structures) is the most massive wall of the residence, measuring 1.1 m wide. Several less massive walls form the rooms to the east. The bricks, standard in shape, measure about 40 x 20 x 12 cm. A number of rooms had well-preserved beaten earth floors upon which were large amounts of locally made pottery of Egyptian and Canaanite types, with the Egyptian types predominating. Shards of imported Cypriot white-slip II milk bowls as well as some Mycenaean pottery were found.

Among the Egyptian-type vessels, those painted blue, the so-called "Amarna blue," were found. Some of the Egyptian vessels, such as a chalice and a small drop-shaped painted vessel both from clear-cut Amarna-era loci, have exact parallels at Amarna proper. Here we must stress that Egyptian pottery has a long chronological range and it is therefore difficult to pinpoint it to a short (defined) period. The Amarna blue, for example, though so typical to Tell el-Amarna proper, has a range wider than the Amarna era proper. We hope a detailed study of the well-stratified pottery of Deir el-Balah will shed new light on the



Site map. Plane view shows cemetery to the left of the dune. Tombs 114, 116, 118, and 301 were undisturbed. Settlement area with stratigraphic levels exposed to right of dune. Cross section indicates extent of dune at stages of excavation.

development of Egyptian pottery and make a more precise typological development possible.

Three of the finds that help us in dating the residence to the Amarna era and in tying the settlement to Tell el-Amarna proper include the following. A *favissa* (pit) to the west of the residence in the open area alongside the building was found, which contained a pottery stand and a clay bulla (seal) bearing four hieroglyphs, two *udjats* and two *nefers*. The closest parallel to this seal comes from Tell el-Amarna, providing us with a good chronological indication of the date of the locus and of the buildings of St. 6. It also significantly indicates possible correspondence between Tell el-Amarna proper and Deir el-Balah (since bullae were used to seal papyrus letters).

From Locus 1006, which contained a good assemblage of Egyptian pottery finds, four worked stone kurkar bases, square in shape with sloping sides and a slight depression on the top, were found. They measured 13 x 13 cm. These seem again to link Deir el-Balah with Tell

el-Amarna proper, as identical stone bases were found there in a bedroom niche where they served as the supports for the four legs of a bedstead. Many well-known and well-preserved wooden beds have been found in Egypt. But this feature of stone bases is unique to Amarna and would link us with Amarna proper.

On the floor of Locus 1392 about 10 cylindrical pieces of jasper (carnelian?) and blue frit were scattered about. Traces of gold dotted the blue frit. Each cylinder was pierced through by a square aperture. Both the size of the pieces and the nature of the aperture indicated that they are not beads for a necklace. Rather, they should be reconstructed as a staff or flail, similar to the ones found in the tomb of Tutankhamun. On these lines we can reconstruct alternating pieces of blue frit and carnelian on a wooden rod that perished. The size and beauty of the objects give additional proof of the specifically Egyptian character and high culture linking this stratum to the Amarna age. Additionally, it is interesting to note that the parallel flail from the tomb of Tutankhamun

has links of the same dimensions and bears a cartouche reading "Tutankhaten," not "Tutankhamun," indicating that the parallel flail was crafted early in Tut's life, close to the end of the Amarna age.

Intermediate 6-5

Sandwiched between the Amarna residence and the monumental fortress, remains of another stratum including a structure, floors, and four pits were clearly recognized. Diagnostic finds were lacking, however. It appears that after the destruction of the St. 6 settlement, a small interim occupation occurred but did not constitute a major occupation level.

Stratum 5

St. 5 presented a well defined and cohesive picture. The prominent feature was a nearly square monumental structure resembling a fort or tower complex. It was constructed both on the remains of the Amarna residence and on the meager remains of the interim stratum, and in direct proximity to the man-made pond, which continued in use during this period. This close proximity of fortress and water installation is graphically depicted on the map of the Asiatic campaigns of Seti I on the northern wall of the great Hypostyle Hall in the Amun Temple at Karnak. In this depiction fortresses with water installations along the highway from the Delta region to the Egyptian garrison town of Gaza are represented. Deir el-Balah with its fort and pond fits into this picture of garrison outposts along the ancient Egyptian route connecting the two areas. Rarely does the archaeologist have such dramatic material confirmation of historic and pictorial sources.



The depiction of fortresses with water reservoirs—like that from Stratum 5 at Deir el-Balah—on the road from Egypt to Canaan (the Ways of Horus) by Seti I. From the great Hypostyle Hall in the Temple of Amun at Karnak. (Reproduced from Sir Alan Gardiner, *The Ancient Military Road between Egypt and Palestine*. JEA 6: 99-116 [1920]).

The fortress measures 20 x 20 m with 14 rooms and a tower at each of its four corners. The massive mud-brick walls, preserved as high as 1 m, have proven to be only the foundations of a structure that stood at least two stories high. The main outer walls of this complex were 2.4 m wide and the mud bricks measured 50 to 60 x 30 x 10 to 12 cm. A subsidiary, adjacent building on the western side of the fortress was related in function to the fortified building.

The correlation with the Seti relief as well as the "Egyptianizing" feature of a layer of sand along the base of the foundation trench indicate that the fortress was built by the 13th century B.C.E. The length of time the fortress was in use, however, is difficult to define since no floors were found in the building itself (either because only the foundations remained or because the building was never finished; in the excavators'

opinion, the former suggestion is the more likely possibility).

Stratum 4

The nature of the site changed totally with this next stratum from the monumental character of the previous residence and fortress to an artisans' quarter and industrial area. At least two building phases were discerned. To this stratum were allocated structures and installations, spanning the 13th century, that were built on top of the filled-in crater. Private buildings as well as a water installation, industrial kilns, heavy ash layers, and associated finds provided the evidence of the change of character in the site.

The fragmentary walls of the private buildings, again constructed from mud brick, were likely the homes of the artisans. The buildings contained typical kitchen installations including *tabuns* (clay ovens) and cooking pots.

A large, planned building with a water installation in one room was excavated. It was most likely connected with the preparation of clay used in the pottery coffin industry. The installation is built of large slabs of worked kurkar, paved with shells and plaster. Noteworthy is the use of stone, which is scarce at this site.

Three kilns were discovered in the northernmost excavated area of the settlement. Two, measuring 1.8 x 1 m and 2.6 x 1.3 m, were partially subterranean, about 0.5 to 1 m below the living surface. They were constructed of mud bricks of various sizes. Very little of the superstructure remained, but they were apparently vertical or "up-draught" kilns, typical of the period. No remains of a platform, which would have created a separate firing chamber, were found. However, in one of the kilns a circular hole, perhaps originally for a post, may point to the existence of a pillar that would have supported such a platform. Inside this kiln a pottery coffin base with holes like those of the coffin uncovered in Cemetery 300 was found and a nose belonging to a coffin lid was lying nearby, indicating that the kilns may have been used to fire the anthropoid coffins or at least their lids.

The third kiln, approximately 2.5 x 1 m, differs from the others in its bottlelike shape. It is very similar to a kiln excavated at nearby Tell Jemmeh. The brick tumble inside the kiln included numerous broken coffin pieces. These may have been used in the construction of the mud-brick superstructure, or perhaps suggest a connection with the coffin industry.

The heavy ash layers filling the pond along with the associated industrial kilns probably relate to the pits in which the coffins were fired. It appears that only the lids themselves were refired in the kilns. The problems of the making and firing of the coffins in conjunction with the archaeological features of St. 4 are currently being studied by ceramicists. The evidence for coffin construction at the site is clear-cut. Neutron activation analysis of the coffin material has confirmed that the clay is local. A number of coffin bases, with the lower parts executed in the coil technique, and many fragments of coffin lids have been uncovered.

Alongside the clear-cut coffin industry, specific finds from the settlement provided concrete evidence that many of the burial gifts were locally made and that the artisans' quarter housed a thriving and varied crafts industry. Evidence for nearly every type of burial gift was found including:

- Evidence of lapidary industry in the form of a carved stone reclining nude figurine of which exact parallels were found in the cemetery.

A typical figurine in Egyptian tombs, it was buried as a "divine concubine" to accompany the dead.

- *Ushabti* or servant figurines, typical Egyptian grave gifts, who were to wait upon the dead in the afterlife. Again, exact parallels were found in the cemetery.
- Chunks of ochre for coloring the coffins, figurines, etc., and the stone bowls in which the ochre was ground.
- A large number of fragments of Egyptian-style spinning bowls, which gained wide use in Canaan. These may bear connection to production of traces of linen found on the bronze objects in the coffins.
- A horde of scrap bronze may relate to the production of the bronze vessels and implements of which many were found in the cemetery.
- Two identical complete molds were found, and most importantly, though not in the same place, an exact-fitting positive. Nearby the molds, heaps of clay for modeling were found.

Of special interest is a stamp carved with the image of the god Ptah. Ptah, among his other attributes, was the guardian god of artisans. The use of the stamp is still a question. A connection with the making of molds for faience plaques has been suggested.

The dating of St. 4 spans the period of Ramses II, including most of the 19th dynasty, as evidenced by two scarabs found in the settlement, and parallels the major use of the cemetery.

Stratum 3

Five pits containing Philistine pottery were dug into the LB deposits of St. 4. No clear-cut traces of walls have been found relating to these pits. Philistine pottery was also found in large quantities in the Byzantine wadi. Its presence indicates that a more substantial Philistine settlement was located southwest of the area excavated and hence remains under the dunes.

The pits contained mainly fragments of Philistine bowls, kraters, and beer jars. The predominant type was white-slipped bichrome ware with vertical wavy line and spiral decoration. Egyptian-type bowls and fragments of Egyptian-type beer bottles were found together with the Philistine pottery indicating that the Egyptian flavor of the site continued even as the new Philistine elements were introduced. A similar phenomenon can be seen in the tombs of Tell el-Far'ah (south). The reoccupation or incorporation of Philistines in Egyptian strongholds is one of the characteristic settlement patterns of the Philistines in Canaan and Israel.

The range of Philistine occupation at the site on the basis of the ceramic evidence does not seem to indicate an early appearance of the Philistines at Deir el-Balah because of the lack of elaborately decorated pottery. Rather, the more simply decorated types found at Deir el-Balah indicate a slightly later phase (approximately the second half of the 12th to the early 11th centuries B.C.E.).

Stratum 2

Two small pits cut into the LB levels had fragments of clearly Iron Age pottery. Most fragments were of bowls with red-slip and irregular burnish. Additional quantities of shards were found in the Byzantine wadi, again, as with the Philistine ware, indicating that a sizable Iron Age settlement was once located to the southwest of the area excavated and now lies under the dunes. Again, no traces of walls associated with the Iron Age shards have been found. This pottery assemblage is datable to the 10th century with probable extensions into the 9th century B.C.E.

Stratum 1

After a gap of 1400 years, Byzantine presence in the area is indicated by huge amounts of pottery found in a wadi that cuts across the LB crater. Though no definite traces of a settlement have been found, historical sources indicate the presence of a monastery in the area. Both geologic studies and historical records indicate that it was during the Byzantine era that the large sand dunes accumulated.

Acknowledgments

Five seasons of excavation from 1980 to 1982 were conducted at Deir el-Balah under the auspices of the Institute of Archaeology of the Hebrew University of Jerusalem. The principal investigator and director of the excavation was Trude Dothan of the Institute of Archaeology. The core staff, composed primarily of graduate students from the institute included: Baruch Brandl, chief stratigrapher; Ann Killebrew, field supervisor; Gary Lipton, surveyor and archaeologist; Bonnie Gould, chief registrar; Hannah Bernick, assistant registrar; Ehud Netzer, architectural advisor; Shlomo Dahan, administrator; and Zev Radovan, photographer. The workforce was composed of 25 to 30 local workmen and students of the institute. Scientific consultants were: B. Arensburg, anthropology; N. Bakler, P. Goldberg, D. Niv, and Arlene Rosen, geology; A. Isar, hydrology; I. Perlman, archeometry; and Leora Hurvitz, osteology. The excavation was made possible by grants from the National Geographic Society and the Dorot Foundation. Special thanks are due to the Israel Defense Forces and to D. Meron, archaeological staff officer of the Gaza Strip. The final publication of the decade of excavation at Deir el-Balah will appear in *Excavations at Deir el-Balah, Volume II: The Cemetery and the Settlement*, a forthcoming volume in the *QEDEM* series of monographs, by T. Dothan with B. Brandl, A. Killebrew, G. Lipton, and B. Gould.

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