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## BAB EDH-DHRA'

## IDENTIFICATION

Bab edh-Dhra' is located on the Jordanian side of the Dead Sea, east of the Ghor el-Mazra'a and the Lisan peninsula at the southeastern end of the Dead Sea. It is situated about 240 m below sea level. The site includes a walled town on the south bank of Wadi Kerak, extramural occupation in the Sahl edh-Dhra' to the south and east, and a large cemetery 500 m southwest of the town. The asphalt road from Kerak to Mazra'a and Safi passes between the town and the cemetery. A modern settlement of four hundred townhouses south of the cemetery has been built for employees of the Arab Potash Company.

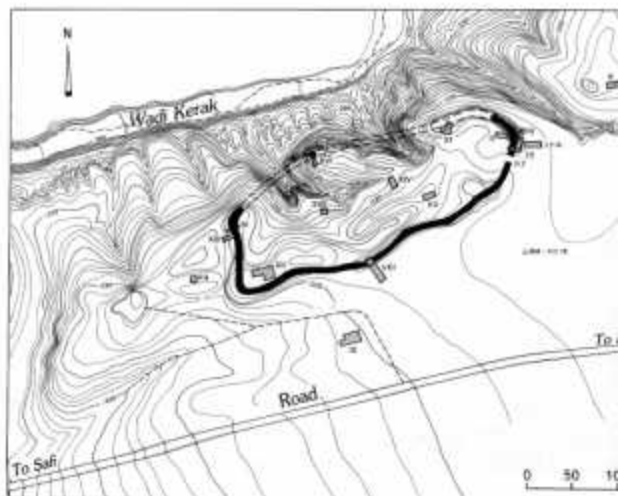
The site of Bab edh-Dhra' has been discussed in connection with the "cities of the plain" (Gen. 13:10-13, 19:28-29) because of the traditional view that those cities were located at the southern end of the Dead Sea. W. F. Albright conjectured that Bab edh-Dhra' was a ceremonial site for the cities and that their ruins were probably located under the shallow waters of the southern basin of the Dead Sea. P. W. Lapp interpreted Bab edh-Dhra' as a cultic burial ground for the cities. The discovery of four other sites with Early Bronze Age cultural materials during a survey of the southern Ghor region in 1973 led W. E. Rast and R. T. Schaub to suggest a possible link to the biblical cities. W. C. Van Hattem carried this suggestion further by identifying Bab edh-Dhra' as Sodom. In an article that analyzes the tradition of Sodom, Rast has revised the suggestion that all the Ghor sites were historically linked with the cities of the plain, arguing that the biblical tradition centered originally on a pair of cities, Sodom and Gomorrah. The two related Early Bronze Age towns of Bab edh-Dhra' and Numeira may thus have generated the popular biblical tradition.

## EXPLORATION

Although extensive ruins in the Sahl edh-Dhra' were noted by various nineteenth-century explorers, such as F. de Saulcy, C. L. Irby, J. Mangles, and J. W. Lynch, the walled town area was not discovered until A. Mallon noted it during the 1924 survey of the Ghor by the American Schools of Oriental Research and the Pittsburgh-Xenia Seminary, under the direction of W. F. Albright and M. G. Kyle. In the published reports on the survey, Albright and Mallon included descriptions of what they termed an enclosure, several structures outside it, a series of supposed cairn tombs scattered over the plain, and seven fallen monoliths east of the town.

In 1964, further attention was drawn to the site when it was realized that pottery that had glutted the antiquities markets since 1958 had its origin in the cemetery area of Bab edh-Dhra'. A sampling of this pottery was published by S. J. Saller.

In addition to the 1973 Rast-Schaub survey mentioned above, there have been more recent explorations of the Sahl edh-Dhra' region. The area just south of the Bab edh-Dhra' cemetery was surveyed in 1977, before the construction of the



Bab edh-Dhra': plan of the settlement and excavation areas.

modern township site, by D. McCreery and V. Clark. McCreery published a report on the overall results of this survey, and Clark, in a later article, discussed the Chalcolithic tumuli. Farther to the east, on the banks of Wadi edh-Dhra', a sounding at a Neolithic site was made by C. Bennet in 1980. Extensive surveys of the region have also been conducted in connection with the 1975-1981 excavations.



Bab edh-Dhra': aerial photograph of the settlement, looking north. The cemetery is located south and west of the road.

## EXCAVATIONS

**LAPP'S CAMPAIGNS.** The rediscovery in 1964 of the site's importance prompted a series of three excavations—two in 1965 and one in 1967—sponsored by the American Schools of Oriental Research and directed by P. W. Lapp. Two field seasons, in March and April 1965 and in February 1967, focused on various cemetery areas. The majority of the tombs and funerary buildings examined were located in cemetery A. Cemetery B included a series of "tholoi" located on an east-west line along the modern road. Several tombs and a funerary building were excavated in cemetery C, on the western slopes of the cemetery area as it descends into the Ghor. Cemetery D contained only one tomb, approximately 500 m to the east of cemetery A.

Soundings in the settlement area were conducted during the second field season, in the fall of 1965. Seven fields were opened up, but four of them were very limited. The major fields (I and II on the east and IV on the west) were plotted in relation to the settlement's defensive system. A major stone wall dating to the Early Bronze Age III was uncovered at the eastern and western ends of the town site. On the east end, an earlier mud-brick wall was exposed under the stone wall. The small probes within the settlement (fields III and V-VII) yielded only limited occupational data; however, on the basis of the debris indicating a settlement and the defensive walls, Lapp concluded that the site represented the ruins of a town, rather than a religious enclosure as proposed by Albright.

In addition to the preliminary reports on the three seasons, Lapp published two papers interpreting the overall significance of the finds at Bab edh-Dhra'. One study linked the cemetery at Bab edh-Dhra' as a possible ceremonial burial ground to the cities of the plain. A second traced the origins of the first Early Bronze Age settlers of the area to southern Russia and connected their migration to Bab edh-Dhra' with the Kurgan movement theories of M. Gimbutas.

**EXPEDITION TO THE DEAD SEA PLAIN (EDSP).** After Lapp's untimely death in 1970, Rast and Schaub, both staff members of the 1967 expedition, took over the responsibility of publishing the final reports of the excavations. Their research on Bab edh-Dhra' prompted a new survey of the southern Ghor in 1973. The discovery of four additional Early Bronze Age sites (Numeira, Safi, Feifeh, and Khanazir) by the survey led to the organization of a new expedition, co-directed by Rast and Schaub and devoted to exploring the interrelationship of the sites.

The expedition is sponsored by the American Schools of Oriental Research. Four field seasons at Bab edh-Dhra' (1975, 1977, 1979, and 1981) and Numeira (1977, 1979, 1981, and 1983) have completed the first phase of the expedition. The Bab edh-Dhra' cemetery project is co-sponsored by the Smithsonian Institution, with D. Ortner as coordinator. A second phase of the expedition, concentrating on the sites of Feifeh and Khanazir, began in 1989.

The EDSP has continued Lapp's numbering system. At the town site, thirteen new fields have been investigated. Two were located along the defenses: field VIII on the line of the southern wall and field XIII on the exterior side of the western wall. The earlier field IV on the interior of the

western wall was also expanded. Four fields were plotted on the highest areas within the town: field XI in the northeast, fields XII and XVIII in the southwest, and field XVI along the northern ridge. The interior slopes of the town were examined in fields XIV, XV, XVII, and XIX. Excavation in field IX to the south of the town site and field X to the northeast focused on extramural occupation. Area F, which contained tombs and occupation, was situated west of the defensive line.

A total of thirty-three shaft tombs and four funerary buildings—most of them in cemetery A—dating to the Early Bronze Age have been excavated during the expedition's four seasons. Among the tombs from other areas, one was excavated in cemetery B, three in cemetery C, and one in cemetery D. New areas of the cemetery that were explored were cemetery E, between cemeteries A and D, with a single surface burial; area F, west of the town, with four tombs; and cemetery G, between cemeteries A and C, with six tombs excavated. Two occupation areas were also discovered on the edge of the cemetery, designated areas H and J.

## EXCAVATION RESULTS

Settlement pattern	Field evidence	Period	Tomb types
Sherd scatter	Potash site	Chalcolithic	Tumuli
Seasonal pastoralism	Fields H, J	EB IA	Shaft tombs
Village	Fields F, J	EB IB	Shaft tombs
	IV, XI-XIII		Surface burials
	XIV		Round buildings
Enclosed settlement	I, II, IV, XI, XII-XIV, XVII, F	EB II	Round and rectangular buildings
Walled town	I, II, IV, XI-XIV, XVII, XIX, F	EB III	Rectangular buildings
Open settlement	IX, X, XVI	Late EB III- EB IV	Tombs with stone-lined shafts

**GEOLOGY.** The town site is situated on an alluvial fan surface consisting of sediments washed out from Wadi Kerak. A major border fault lies just to the east of the site and extends north along the shore of the Dead Sea. Geological investigation has concluded that during the Early Bronze Age the floor of Wadi Kerak was at least 20 m above its present level. Postoccupation downcutting of the wadi has caused dramatic topographic change within the town. Two major tributary wadis removed large areas of the occupational levels in the center of the town. The upper levels of the natural stratigraphy, on which the town was built, include pre-Lisan gravel and sand, Lisan marl, and, in some of the higher areas, a fine-grained, cross-bedded sand with gravel interbeds at the top of the Lisan marl.

**PALEOLITHIC PERIOD.** The earliest evidence of human utilization of the Bab edh-Dhra' area was discovered during the 1977 expedition's survey near the mouth of Wadi Kerak. Most of the light scatter of material appeared to date to the Middle Paleolithic, although there were representative Lower Paleolithic tools limited to solitary discards or found in secondary deposition.

**NEOLITHIC PERIOD.** Pre-pottery Neolithic is represented at a site at the eastern edge of the Sahl edh-Dhra', about 5 km (3 mi.) east of Bab edh-Dhra'.

A series of occupation levels was exposed in the sides of a trench cut on the west bank of Wadi edh-Dhra', near a spring that today is the most abundant source of water in the edh-Dhra' area.

**CHALCOLITHIC PERIOD.** Chalcolithic remains were reported from the 1977 survey of the potash company township site. Among the structures dated to the Chalcolithic period were several circular stone masses, below which were meager human remains indicating burials. Nearby were fragmentary stone foundations of a building. Most of the Chalcolithic material appeared to be concentrated in the northwestern area of the township site, just south of the Bab edh-Dhra' Early Bronze Age cemetery.

**EARLY BRONZE AGE IA.** For the Early Bronze Age, the EDSP has continued to use the terminology set forth by Lapp, with Early Bronze Age IA denoting the earliest and Early Bronze Age IV the latest phases represented.



Burial chamber in an EB I shaft tomb.

The data for Early Bronze Age IA came predominantly from shaft-tomb burials. The Lapp excavations cleared twenty-eight shaft tombs with forty-eight chambers in cemetery A, containing pottery of the Early Bronze Age IA type. Six additional tombs with single chambers were located on the slopes of cemetery C. The EDSP has excavated twenty-two Early Bronze Age IA shaft tombs with sixty-three chambers in area A, and eight tombs in areas C, F, and G, with eleven chambers.

The majority of shafts from the early phase are circular or elliptical in plan. Exceptions were three examples with rectangular shafts located in the same area of the cemetery. Chambers cut from a shaft varied from one to five. Of the fifty shafts excavated in cemetery A, twenty-four had a single chamber, five had two chambers, and twenty-one had three to five chambers. The chambers varied in shape from circular to square, with flat, slightly rounded, or domed roofs and with a diameter between 1.47 and 2.5 m and a height between 0.75 and 1.25 m.

Within the chambers, burials usually consisted of a central bone pile with skulls arranged in a line to the left of the bone group, as seen from the doorway. The bones were usually disarticulated but partial articulation has been observed in several chambers excavated by the EDSP. Traces of matting were frequently found under the bone groups. Among the tomb objects handmade ceramic vessels dominated. The most frequent shapes were wide deep bowls, small deep bowls, large ledge-handled jars, medium-sized loop-handled jars, and loop-handled jugs. All of these basic shapes occurred in both fine and plain wares. The majority of vessels were fine ware with thin sides and a reddish-orange slip that was frequently burnished. Decoration, which occurred mostly on bowls and jars, was either punctate or a raised, slashed band. The plain ware pots had thick sides, a rough surface finish, and, infrequently, a slip. Punctate decoration, generally cruder in technique, was also found on these vessels. A few of the forms have close parallels in the Jericho Proto-Urban A tombs, but similar groups, especially with the distinctive ware and decoration, are not yet known outside of the Bab edh-Dhra' area. Other objects included stone mace heads, shell bracelets, stone jars, beads, unfired clay figurines, and, on rare occasions, cloth and wooden objects.

The only major deviation from the normal burial pattern appeared in a small group of tombs containing fully articulated burials. Lapp recorded three instances of articulated burials in the Early Bronze Age IA chambers, one of which also contained disarticulated burials. During the 1981 season of the EDSP, four chambers were found that contained evidence of articulated burials. It is clear, however, that some of the articulated burials were still secondary—that is, were moved to the tomb chamber from an earlier burial before the flesh had completely decayed.

Cemetery C is set apart not only by its location at the western edge of the cemetery, but by its different tomb types and distinctive pottery. The five early tombs excavated by Lapp in this area were located on a steep slope. Shallow shafts, some vertical and some cut at an angle, led to single chambers, most of which had a wall of stones blocking the opening. With one exception, the burials in cemetery C were all disarticulated. Pottery from the tombs in this area was predominantly different in shape and ware from the cemetery A types. Bowls are shallower and have a carinated profile; jars have taller necks and are generally smaller; and most of the pots are red-slipped and are frequently decorated with an appliqué of clay dots or a slashed band of clay.

These differences are slight and do not challenge other data that clearly show that the cemetery A and C shaft tombs are at least partly contemporary. Typical cemetery A vessels have been found in cemetery C tombs and vice versa. Three of the cemetery C tombs excavated by Lapp had cemetery A pot types and three chambers excavated by the EDSP, two in cemetery A and one in cemetery G, had cemetery C type vessels. The different structural features of the cemetery C tombs are best understood as adaptations to the slope. One of the cemetery C tombs excavated by the EDSP on a flat area above the slope had a deep

shaft, two chambers, and door openings with blocking similar to the cemetery A shaft tombs.

Only eight Early Bronze Age IA chambers were excavated in cemeteries G and F, but they offered critical sequential dating evidence. In cemetery G, located between cemeteries A and C, two Early Bronze Age IA shaft tombs were cleared. One of these (tomb G-5), with two chambers, was located directly below an Early Bronze Age IB round funerary building. In area F, located slightly to the west of the town site, Early Bronze Age IB habitational levels were found above several collapsed Early Bronze Age IA tomb chambers.

The slight evidence for Early Bronze Age IA occupation is restricted to the outer limits of the cemetery area and is best interpreted as seasonal or temporary. Lapp reported campsite data from an excavation in the eastern area of the cemetery. The 1977 survey of the potash company township site south of the cemetery recorded some surface concentrations of Early Bronze Age IA pottery. Area H, excavated by the EDSP in 1977 on the high northern edge of the cemetery, yielded a midden deposit with heavy accumulations of bone and Early Bronze Age IA domestic pottery. During the 1979 season, occupation levels with heavy ash layers and Early Bronze Age I domestic pottery were observed in the sides of a trench dug to lay a water pipe along the modern road on the northern edge of the cemetery area. Excavations there (area J) during the 1981 season revealed two habitation levels, both with structures with stone wall foundations. The later level is Early Bronze Age IB, but the earlier level may have been used in the latter part of the Early Bronze Age IA.

Overall, the evidence of secondary burial patterns, mostly disarticulated but some with partial articulation, in the Early Bronze Age IA tombs; the consistent basal Early Bronze Age IB occupation in the town; and the lack of permanent Early Bronze Age IA habitational evidence lead to the conclusion that during the Early Bronze Age IA the utilization pattern of the region was temporary. It seems likely that there were periodic returns by a pastoral group to rebury its dead in a traditional burial ground. The occasional articulated burials may be associated with deaths that occurred during these visits, or may belong to the end of this period, as a more permanent occupation began to be established.

**EARLY BRONZE AGE IB.** Early Bronze Age IB cultural materials and occupational levels, some with remnants of stone and brick structures, were found at the lowest levels above bed gravel and marl in widely scattered areas of the site, witnesses to the establishment of village life. The Lapp excavations recorded Early Bronze Age IB pottery loci at the lowest levels (below the later mud-brick defensive line) in field II. In fields IV, VIII, and XIV, similar loci were recorded by the EDSP but were not associated with surfaces or structures. Field XII contained portions of two buildings with mud-brick walls, habitational surfaces, and a cobbled hearth. Remnants of mud-brick structures associated with occupational layers and ash accumulation were also found in areas XI, XIII, and F. In area J, on the northern edge of the cemetery, a building with foundation walls seven courses high made of small boulders was uncovered. Mud bricks, plaster remnants, and roof



Tomb A53: round burial structure, EB IB.



debris indicated a substantial building in this area.

Bab edh-Dhra' is thus part of the pattern of emerging villages that developed throughout Palestine during the Early Bronze Age IB. Because the cultural material of these villages suggests vestiges of the area's earlier indigenous Chalcolithic populations, the available data seem to favor a theory of local rather than foreign origin for this phase of the Early Bronze Age culture in Palestine.

The Early Bronze Age IB tombs show some continuity with Early Bronze Age IA types but also display innovation. Four shaft-tomb chambers, two surface burials, and two round mud-brick funerary buildings containing the distinctive painted line decoration of the Early Bronze Age IB have been excavated by Lapp and the EDSP. Three of the shaft tombs had single chambers with disarticulated burials. The fourth shaft-tomb chamber (A 100N), containing articulated and disarticulated burials, apparently reused an Early Bronze Age IA chamber after the earlier bone group and objects were cleared out. Two surface burials with Early Bronze Age IB pottery were located directly over the shafts of the Early Bronze Age IA tombs. The two round burial houses represent the most distinctive shift in burial pattern. Both houses were similar in size (3.5–3.7 m in diameter), with entryways flanked by orthostats and lintel stones and a threshold with a step down to the floor of the chamber. The latest burials in one house were articulated; this was probably the practice in both houses, as earlier burials were moved aside after the flesh had decayed. One of the houses also revealed extensive burning, and three of the crania in it had head wounds inflicted by a sharp weapon. These features, along with the consistent, extensive, and thick ash-layered areas associated with the Early Bronze Age IB occupational levels, raise the possibility of a violent end to the Early Bronze Age IB occupation.

**EARLY BRONZE AGE IC.** A sudden termination of the Early Bronze Age IB phase may be seen as supporting the positions of Lapp and J. A. Callaway, both of whom argued for a foreign imposition of the Early Bronze urban culture, beginning with Early Bronze Age IC. On the other hand, the evidence for cultural continuity between the Early Bronze Age IB and II, including the burial practices and artifact typologies, is compelling. The EDSP has found no solid evidence for an Early Bronze Age IC phase at Bab edh-Dhra'.

**EARLY BRONZE AGE II.** The first clear signs of an emerging urban culture appear in the Early Bronze Age II. Enclosure walls defining the town area are built and large buildings are constructed on the high areas of the town site. Substantial development along with population growth clearly characterize this phase.

The topography of the town site area, erosional factors, and the massive presence of the Early Bronze Age III stone wall have contributed to the difficulty of tracing the full extent of the Early Bronze Age II town wall. Two east-west natural ridges approximately 100 m apart border the town site area on the north and south. During the Early Bronze Age II, the low valley area on the east between these ridges was closed off with a substantial mud-brick wall. Major segments of this wall (wall B), 2.5 m wide, constructed on basal gravel and preserved nineteen courses high in places,

were exposed by the Lapp excavations in fields I and II. Wall B was underneath the later and larger stone wall (wall A) of the Early Bronze Age III, which followed the same line. A separate mud-brick structure at least 5 by 5 m, located to the east and possibly connected to wall B, may have been a gate tower associated with the wall. Excavations by the EDSP along the southern and western defensive lines and on the northern ridge have uncovered no other traces of a defensive wall datable to the Early Bronze Age II. The deep erosional cuts through the northern ridge and the steepness of the slope above Wadi Kerak in this area are probably responsible for the lack of any defensive wall traces in the central portion of the northern side of the site. On the south, in field VIII, the Early Bronze Age III stone wall was built on the ridge directly on the natural marl. On the west, in field IV, the foundations of the Early Bronze Age III wall were cut into Early Bronze Age II debris layers. Two walls of an Early Bronze Age II mud-brick building and a courtyard were recorded; one of the walls runs directly under the later Early Bronze Age III stone wall, but no signs of an Early Bronze Age II defensive wall appeared. West of the Early Bronze Age III town wall, in field XIII, another Early Bronze Age II mud-brick wall one course wide ran perpendicular to and below the Early Bronze Age III town wall. It is possible that the subsequent construction of the Early Bronze Age III wall on the west removed all traces of the mud-brick wall. In this case, it is possible to surmise that the Early Bronze Age II town would have utilized the natural ridges on the north and south as defensive lines and closed off the low areas on the east and west with walls. A second possibility is that the entire area was enclosed and the subsequent construction of the Early Bronze Age III wall obliterated the traces of this wall, except for the remaining segments at the eastern end.

The two highest areas on the site, at the southwest and northeast, began to be utilized as public areas during the Early Bronze Age II. In the southwest, overlooking the Dead Sea, the construction of the first of two major sanctuary buildings uncovered in field XII occurred during this period. The foundation of this broadroom structure (12 by 6 m), was built of small to medium stones, plastered on their exterior surfaces. Five large wooden columns positioned on pedestals spaced along the center of the building supported its roof. On the northwest, overlooking Wadi Kerak at the highest area of the site, the earliest phase of a large building excavated in field XI, with at least four rooms and several subphases of use, may belong to the latter part of the Early Bronze Age II. The size and location of the building, together with other features—such as the placement of benches along the walls of several rooms and the scarcity of domestic pottery—support the interpretation that it served as an administrative center.

Toward the center of the town, domestic and industrial areas are associated with deep cultural debris, although some of the depth is due to filling to level off the steep slopes of the interior. The lowest levels reached in field XVII, 3 m below the surface, revealed two well-built stone foundation walls of a late Early Bronze Age II structure bordering a courtyard area. The courtyard contained a deep clay-lined silo and the remnants of two wooden clay-lined vats. In a 7-m-deep trench in field XIV, four subphases were associated with Early Bronze Age II materials. A series of mud-brick walls, one preserved ten courses high, were built directly on marl surfaces. At the beginning of the Early Bronze Age II, a major leveling of this area took place that was represented by 1.5 m of fill sealing the Early Bronze Age IB levels.

In the cemetery, the earliest part of the Early Bronze Age II revealed a continuation of the burial practices of the Early Bronze Age IB. A large circular chamber entered through a slab-lined doorway (tomb A4) contained early phase II vessels. Also, a round mud-brick funerary building with walls sloping inward in a beehive shape (tomb A56) included two layers of Early Bronze Age II burials with evidence that primary burial was the normal pattern. A third funerary building with predominantly Early Bronze Age II forms had straight walls with rounded end walls (tomb A42). Because at least four of the large rectangular funerary buildings utilized throughout the Early Bronze



Field XIX: EB III retaining walls.

EB III funerary building.



Age III also contained Early Bronze Age II pottery types, it seems probable that these buildings must already have been built in the Early Bronze Age II phase.

**EARLY BRONZE AGE III.** The town reached its greatest development in the Early Bronze Age III. A 7-m-wide continuous wall with stone foundations and a mud-brick superstructure was constructed around the western, southern, and eastern sides of the site. On the east and south, the footing of the wall was placed on steps cut into the natural marl; in general, the defense system followed the natural contours of the site. Traces of the same wall along the northern side have been found only at the northeast and northwest ends, and the disappearance of the wall across most of the north appears to have been caused by the severe erosion described previously. The defensive wall was built in sections with transverse faces between 7- to 15-m intervals, a possible earthquake-protection device. Flat conglomerate stone, cut from a local quarry, was used as a bedding layer for the mud-brick superstructure. The major gate on the west provided direct access to what appears to have been a plaza dominated by the higher sanctuary area to the south. Wooden beams along the southern face of the gate suggest that the gateway proper had a wooden door. In a later phase, during the Early Bronze Age III, the gateway was blocked with a secondary wall made up of smaller stones, including discarded mortars.

At the beginning of the Early Bronze Age III, a new sanctuary building was constructed (field XII) on the foundations of the earlier one, with only slight differences in the orientation of the eastern and western walls. The interior plan, however, differed from the earlier structure. A floor made of brick and marl covered the southern half of the building, while an elevated flagstone floor on the northern half was approached by a mud-brick stairway. The doorway to the later building was in the broad wall on the west. To the west of the building a courtyard area, paved with mud brick and plaster, included a semicircular stone altar. Objects found in the court or inside the building included a wooden post with an inlaid design, a cylinder seal impression with a possible cultic motif showing a line of figures behind a wall, and several fan scrapers. Wear analysis of the edges of the fan scrapers suggested that they were probably used to butcher animals.

In the interior of the town, three major phases have been identified, each of which involved fundamental rebuilding. In the earliest phase, retaining walls were built against the slopes of the town's interior, apparently to prevent erosion. Buttress and terrace walls also were constructed to level off new areas for buildings. Most of the walls during this phase were built of mud brick without stone foundations. In field XIV, several walls were leaning at almost a 45-degree angle, a tilt that may have been caused by an earthquake. The middle phase displayed rebuilding following a similar orientation, but in this phase the structures often had stone foundations. Remains of the latest phase suffered the most deterioration, but they suggest a pattern of poorly made mud-brick and stone structures toward the end of the Early Bronze Age III.

In field XI, the major building begun during the latter part of the Early Bronze Age II continued in use throughout several phases of the Early Bronze Age III. The last use of this area involved a major rebuilding, with the construction of two flanking towers with massive stone and timber foundations, each tower being 4 m in width. A 3- to 4-m space between the towers most likely served as a passageway, and thus this structure has been interpreted as a gate. Erosion, however, made it impossible to determine a connection with the defensive system. The evidence in fields IV and XIII that the western gate was closed off in its latest phase supports the interpretation that the northeast tower functioned as the major gate to the city during the latter part of the Early Bronze Age III.

Throughout most of the Early Bronze Age III, burials took place in rectangular mud-brick funerary buildings constructed in the eastern portion of cemetery A. Seven of these buildings were excavated by Lapp and two by the EDSP. Doorways were always in one of the long walls and were flanked by large orthostats. A threshold stone led to a single step down

into the interior of the building. The smallest building was 2.8 by 4.8 m and the largest 7.5 by 15 m. Three of the buildings were approximately 4.5 by 9 m and three others were 5.5 by 11 m. Five of the buildings had cobbled floors, while others had gravel or loose stones.

Burials in the funerary buildings were primary; the earlier ones had been moved against the walls to make room for later burials. Pottery found included a broad range of platter bowls, small saucers, lamps, pitched cups, jugs, and juglets, including miniature forms. A complete classification of the forms, including comparative volume studies and suggested typological sequences, appears in the final report of the Lapp expedition. It is clear from the range and the duplication of the types that many of the buildings were in use at the same time over a considerably long period. It thus seems likely that the buildings were associated with various social units within the town. Evidence for possible social stratification came from the largest building, tomb A22, which contained several pieces of gold jewelry. Typical objects found in the funerary buildings included bronze knives, crescent ax heads, slate palettes, wooden combs, a wide range of beads and shells used as jewelry, and numerous cloth examples, including finely woven line.

Four of these buildings had extensive burned areas, with remnants of burned roof beams and fragments of wattle-and-daub roofing. Although there were a few intrusive later burials associated with the late Early Bronze Age III and Early Bronze Age IV pottery, the destruction of the buildings coincides with the end of the main Early Bronze Age III occupation of the walled town.

It is possible to estimate that during the Early Bronze Age III the walled town covered approximately 9 a. Extramural population also extended to the eastern and western ends. Space in the town and its immediate environs would have been sufficient for a population of six hundred to one thousand individuals. Analysis of the water resources and land available for farming during the Early Bronze Age led to the conclusion that they would have been more than ample to support a population of this size. The major food crop was probably barley, but flotation has yielded a wide assortment of crops, including einkorn, emmer and bread wheat, two-row and six-row barley, grapes, olives, figs, chickpeas, lentils, flax, pistachio



EB III-III gold jewelry.



chios, and almonds. The large size of the flax seeds suggests that irrigation was employed. Weaving tools found in the town site, and large amounts of linen cloth found in the burial houses, suggest a local textile industry. Among the faunal remains, sheep and goat predominate, but large mammal bones are also represented, including donkey and cow. A series of game stones with indentations gouged in the stone in a three-by-ten pattern may date to the Early Bronze Age III, although none have been found in a stratified context.

Exchange in the local region is attested by ceramic objects from the Bab edh-Dhra' tombs which contained temper found only in the Numeira area. Among the cultural items that reflect foreign contact, several—such as slate palettes, combs, and possibly one or two cylinder seals—have their best parallels in Egypt; the majority—including architectural features, cylinder seal impressions, jewelry, some forms of pottery, and a carved bull's head—show Syrian, if not Mesopotamian, influence. Two metal daggers also appear to be Syrian in style. One of them is tin bronze and is thus one of the earliest true bronzes known from ancient Palestine. The other is of relatively pure unalloyed copper. All the other copper-based objects analyzed have low levels of arsenic, which may have come from Anatolia but whose use was virtually universal in southwest Asia in the third millennium BCE.

**LATE EARLY BRONZE AGE III—EARLY BRONZE AGE IV SETTLEMENT.** Evidence for the latest use of the Bab edh-Dhra' site comes from the areas south and east of the town (fields IX and X), one area within the town (field XVI), and a small number of tombs. In field X, about 150 m east of the town site, four phases were distinguished. The earliest included a rectangular mud-brick building with an associated courtyard. Many carbonized cereal remains were recovered from the oven areas in the courtyard. The pottery forms from this level represent a phase earlier than the typical rilled-rim bowls, "teapots," and jars usually associated with the Early Bronze Age IVA (designated the Middle Bronze Age I at other sites). The best parallels come from levels designated late Early Bronze Age III at other Palestinian sites. A thick layer of debris and a fill layer separated the first and second phases. The latter appears to have been limited to a brief time, with only one wall fragment surviving. The last two phases, with typical Early Bronze Age IVA pottery forms, had clear habitational surfaces but only fragmentary structural remains, including two long, parallel stone foundation walls. To the south of the town site, in field IX, only isolated oven areas represented the late Early Bronze Age III phase. A group of rectangular broadroom buildings with stone wall foundations and occupational surfaces included Early Bronze Age IVA materials.

On the northern ridge of the town area, overlooking Wadi Kerak, excavations in field XVI revealed a similar succession of late Early Bronze Age III and IV habitation. Early Bronze Age III usage included two terrace walls, one of stone and one of mud brick, and two storage pits cut into the natural soils. During the Early Bronze Age IV, the area was converted into what seems to have been a ceremonial precinct. In the first phase, several walls were constructed in connection with vertical and horizontal cuts made on the northern slope. The terraces created through this activity were then utilized through three successive rebuilding efforts in the area. The walls and doorways of the various phases all had a smooth plaster facing. The latest phase included a large flat stone, possibly an altar, set on a stone foundation, a mud-brick pedestal column with a flat stone surface, and walls enclosing the altar area. The dozens of animal horns around this area, along with the unique architecture and an incense stand, indicate that it may have been the Early Bronze Age IV cultic center.

In the cemetery, one shaft tomb dated to the late Early Bronze Age III and four with Early Bronze Age IV material have been excavated. The late Early Bronze Age III tomb (tomb D1) had a stone-lined shaft whose back edge was perpendicular to the front edge of the stone foundations of a rectangular building above it. The building itself had no occupational debris. The doorway at the bottom of the shaft led to two large chambers cut into the natural marl; a passageway leads to both chambers. The walls had been plastered. One cham-

ber excavated in 1967 included several articulated skeletons with a small group of pots similar to the pottery associated with the latest levels of the funerary buildings. A few examples of the same type of pottery were also found in the latest Early Bronze Age III tombs at Jericho. The second chamber, disturbed after the 1967 season, was cleared in 1975. It yielded thirteen skeletons and a bronze dagger.

Two Early Bronze Age IV tombs were excavated under Lapp's direction in cemetery A. Both had stone-lined shafts and single large chambers, with partially articulated burials and large groups of Early Bronze Age IVA pottery. Two chambers dated to the Early Bronze Age IVA were also excavated by the present expedition in 1979. The chambers had been exposed by a recently constructed water trench that partially cut through both chambers and obliterated the evidence of a shaft. Some of the pottery published by Albright and J. L. Kelso also belongs to this horizon.

Although interpretation of the latest Early Bronze Age occupation at Bab edh-Dhra' remains problematical, particularly with regard to the critical question of continuity in population with the Early Bronze Age III town dwellers, the settlement pattern of an open village seems clear. The EDSP's rather solid conclusion regarding the Early Bronze Age IV at Bab edh-Dhra' is that there was no occupation on the town site, except for the special area in field XVI—and that most of the occupation seems to have occurred a distance from the town's ruins.

The lack of evidence within the town site, of course, could be attributed to the millennia-long erosion that has taken place there. But there are well-defined areas that have not suffered from erosion, including some where aggradation is the pattern. Within the defense line at the western end of the town, a 4-m build-up of silt levels covers the latest Early Bronze Age III habitation and the collapse of the town wall. No Early Bronze Age IV occupation was found in this area. A similar build-up took place at the eastern end, and probes there did not uncover Early Bronze Age IV levels. In fields XI and XII, located on the highest areas of the town, no evidence of an Early Bronze Age IV habitation was found. Yet, in field XVI, the series of four Early Bronze Age IV levels associated with the sanctuary was uncovered in a well-preserved state.

The positive evidence for the Early Bronze Age IV from fields IX and X outside the town area and from field XVI on the northern ridge supports the interpretation that the settlement pattern had reverted to open occupation. Substantial building remains, abundant carbonized cereal remains, and the articulated burials in the tombs suggest permanent occupation, although seasonal return by peoples still drawn by cultic and traditional ties to the area cannot be ruled out. It seems likely that the erosional forces that the Early Bronze Age III town dwellers were fighting against in the center of the town and the destruction of the town defenses made the town generally unsuitable for habitation by the Early Bronze Age IV occupants.

Whether there was continuity in the populations of the Early Bronze Age IV and III is a more difficult question. Features common to both horizons—broadroom buildings, red-slipped pottery, and primary burial—suggest continuity. However, some major changes in the ceramic typology appear to pose problems for close continuity. The typical high-shouldered, narrow-necked, stump-based jars and juglets of the classical Early Bronze Age III disappear and are replaced in the Early Bronze Age IV by low-



Field XVI: section of the ceremonial precinct(?), EB IV.

*Bab edh-Dhra'*: battle ax of the "epsilon" type, EB III.



profile, wide-mouth, broad-based jars and juglets. This change is deceptive. The narrow-necked vessels can be associated with trade during the urban phase. A comparative study of all of the basic tomb forms throughout the

Early Bronze Age suggests that the "new" Early Bronze Age IV is similar to the basic forms of the Early Bronze Age IB and may reflect a move to a simpler life pattern following the breakup of the town and its networks. A series of calibrated carbon-14 dates from field X suggests a date of 2200 BCE for the latest Early Bronze Age IVA phases of occupation.

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#### Recent Finds

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R. THOMAS SCHUB

## BANIAS

### IDENTIFICATION

The ancient name of Banias—spelled Panias, Paneas, Paneias in Greek and Latin—is the feminine form of the Greek adjective πάνειος, referring to the grotto of Pan (πάνειος ἄντρον or ἀντρίκιον). This name denotes not only the town, but also the region and the Jordan sources flowing from the site (cf. Pliny *NH* V, 71, 74). Because the grotto and water sources can still be seen, the remains of the town and sanctuary could be located, and the Arabic place name—Banias—survived, there is no question about the site's exact identification.

In the medieval period the Jews living here identified the place with biblical Dan and issued their letters, found in the Cairo Geniza, from *Miṣṣar Dan* (Dan Fortress) or *Medinat Dan* (city of Dan). In about 1170 CE, the traveler Benjamin of Tudela even saw the place of the altar of Micah (cf. Jg. 18:29-31) in front of the cave. This identification had earlier appeared in Jewish and Christian sources from the Roman-Byzantine period as the designation "Dan dKisrin" (Jerusalem Targum, Gen. 14:14; Jerome, in *Hiezech*, L. XIV, 48, 21-22; *CCSL* 75, 739; correctly differentiated, however, by Eus., *Onom.* 76, 6-8). This erroneous identification, as well as other biblical names suggested for the presumed pre-Hellenistic site—Baal-Gad (Jos. 11:17) and Beth-Rehob (Jg. 18:28)—were refuted on historical-geographical grounds. Furthermore, even the existence of such an early site is doubtful because, to date, no pre-Hellenistic pottery has been found in the extensive surveys conducted.

The polis built here by Herod's son Philip in 2 BCE was named Caesarea in honor of the emperor Augustus (Josephus, *War* II, 168; *Antiq.* XVIII, 28) and, to differentiate it from the one on the coast, was referred to as Caesarea of Philip (Mt. 16:13; Mk. 8:27; and many other sources). It was renamed Neronias by Agrippa II (*Antiq.* XX, 211; and coins), but the name that eventually took root, especially in the second and third centuries, was Caesarea Panias (Ptolemy V, 15, 21 and VIII, 20, 12; *CG* 4750, 4921; Wad-

dington 1620b; *Tabula Peutingeriana*). The coins struck at Panias from Marcus Aurelius to Elagabalus carry the official name: *Caes(are) Seb(aste) hier(a) kai asu(los) hypo Paneiou*. In ancient Jewish sources the town is called Keisarion or Kisrin and the cave Panias or Panias. From the fourth century onward, the name Caesarea disappears entirely and the city is referred to simply as Panias (cf. Eusebius). In Islamic sources, the site is called Baniyas, and in the French Crusaders' sources, Belinas.

### TOPOGRAPHY

Banias is located at the foot of the southwest extremity of Mount Hermon (Jebel esh-Sheikh), at the northern edge of a triangular plateau, about 1.5 km (1 mi.) wide and 2 km (1.2 mi.) long, at 300 m above sea level. This basalt and travertine plateau is locked between the steep slopes of Mount Hermon to the north and the ascending slopes of the Golan Heights to the east and south. To the west it opens to the northern Jordan Valley, where the plateau is terminated by a topographic step, towering some 60 m above the ground. The scenery was formed by the Rift Valley geological faults and volcanic flows coming from the Golan.

Two ravines cutting through the northern part of the plateau form the town's different quarters. Naḥal Sa'ar (Wadi Za'are), which separates the Golan Heights from the Hermon Massif, runs here in a roughly southeast-northwest course, some 500 m south and parallel to the mountain foot, and empties into Naḥal Hermon. Its waters, perennial in antiquity, are used today for agriculture upstream. Naḥal Hermon (Wadi Baniyas, Wadi Khashabeh) emerges from the mountain on the north (as a continuation of Naḥal Govta) and forms a gorge cutting through the town in a northeast-southwest course. From its point of entry into the plateau, southward for a distance of about 180 m, down to the point where a canyon is formed in the basalt rock, the riversides were embanked by two massive vertical walls. These impressive Roman walls, built of smooth ashlar in courses 0.6 m high, preserved almost