

palace/temple complex sat on a hill overlooking the harbor. Nearly four acres of buildings surround a central courtyard measuring 174 by 87 feet. In the three-story western wing, which contained ceremonial spaces, there is none of the axiality characteristic of Egyptian architecture. Instead, visitors to the palace during its final years entered through the west propylaea, or gateway, then followed a corridor lined with frescoes depicting priestesses and celebrants bearing offerings, before turning left twice to approach the courtyard from the south. On the left (west) wall near the north end of the courtyard was the entrance to the antechamber of a **lustral-basin** (depressed pool) sanctuary called the throne room because of an elaborate alabaster seat found there. On a lower level, along the southern edge of the throne room, was a lustral basin, one of several found in the complex that are thought to have been used in initiation rituals. This basin, which is only about eighteen inches deep, is concealed by a low wall and a screen of Minoan columns. Cult statues and votive offerings indicate that the site was sacred to a female deity linked to the earth and fertility. Long rows of underground storage rooms occupy the western side of this palace wing, dug into the slope of the hillside, with tall ceramic containers for olive oil, grain, and wine still in position.

Buildings on the eastern side of the courtyard have been interpreted as being residential, although some of the suites may have functioned as textile workshops and others were definitely used as storage areas. Some rooms here had views out over the valley below. The primary entrance to this section was made through a grand staircase approached from the middle side of the central court and illuminated by an open light-well. The stair led down to the Hall of the Double Axes, from which a corridor connected to the room Evans dubbed the Queen's **Megaron**, a pleasant space decorated with frescoes that include rosettes and flying dolphins. Smaller rooms behind the megaron contained a bathtub and a water closet (toilet) connected to the palace's drain system. Standards of water supply and drainage at the complex were exceptional for the time. Terracotta water pipes carried clean water through a series of settling tanks and siphons to supply baths, and sanitary sewers carried off waste water from basins and water closets, although the tub in the so-called "queen's apartments" had to be emptied by bailing.

At the northwest corner of the complex was the oldest and deepest (six feet) lustral basin, made accessible by a staircase with light-well (Fig. 2.4), and beyond this ran a series of broad steps, set into a slight rise in the ground and connected to the palace proper by a ceremonial road. This area has been labeled as a theater, although its precise use, as with so much else at Knossos, remains unclear. It seems that the large central courtyard provided the setting for theatrical ritual, including perhaps ceremonial games involving acrobatic feats by young men and women performed on running bulls. Frescoes preserved on some palace walls illustrate these amusements or rituals.

The naturalistic portrayal of the young men and women in these frescoes creates the impression that the Minoans were an energetic and cheerful people who took delight in their own beauty and that of the natural world. In contrast to the stiffness and formality of Egyptian art, frescoes and carvings at Minoan sites seem relaxed and open, emphasizing movement. Women held positions of high status, an unprecedented situation among contemporary civilizations. There is, however, a great deal that is still not clearly understood. The language(s) recorded in Minoan pictographs and on Linear A tablets remain undeciphered; the significance of the double-headed axe widely found in Minoan art is also a puzzle; and it is not known whether the appearance of Mycenaean culture in the final phase of Knossos came as a result of invasion or peaceful assimilation.

THE MYCENAEANS

The Mycenaean civilization takes its name from Mycenae, the largest but not the only citadel in a trading society that appears to have been led by warrior-kings. Mycenaean settlements located on the mainland of Greece date back to about 1600 BCE. Graves from this period preserve a large number of golden objects as well as weapons of various sorts. Heinrich Schliemann, the nineteenth-century excavator of Mycenae, found golden masks, drinking vessels, and other treasure that convinced him he had found material related to the Trojan War. In fact, his finds predate the era of the Homeric tales by four centuries.

Mycenae reached its period of greatness after about 1450 BCE, perhaps invigorated by contact with the more sophisticated Minoan culture. In contrast to the seemingly undefended complex at Knossos, the citadel at Mycenae was built with a strong concern for defense. The city is situated on high ground, protected by mountains on the north and south and flanked by two ravines, allowing surveillance of a wide area down to the coast (Figs. 2.5–2.7). Fortifications erected in the fourteenth century BCE were expanded in about 1300 BCE to enclose the palace compound and an earlier grave circle. These walls are eighteen to twenty-four feet thick and up to forty feet high, constructed of boulders set in position with minimal shaping and no mortar, except for the sections immediately adjacent to the gates, where the stone has been cut into large blocks. The later Greeks thought this impressively scaled masonry to be the work of giants, the Cyclopes, hence the adjective **cyclopean** to describe its construction.

Principal entrance to Mycenae was made through the Lion Gate, which was added when the citadel was enlarged (Fig. 2.8). It was positioned so that the approaching visitor had to pass along an increasingly narrow passageway parallel to the enclosing wall, allowing defenders inside the settlement ample opportunity to attack hostile forces. The gateway is of considerable artistic interest. Single upright

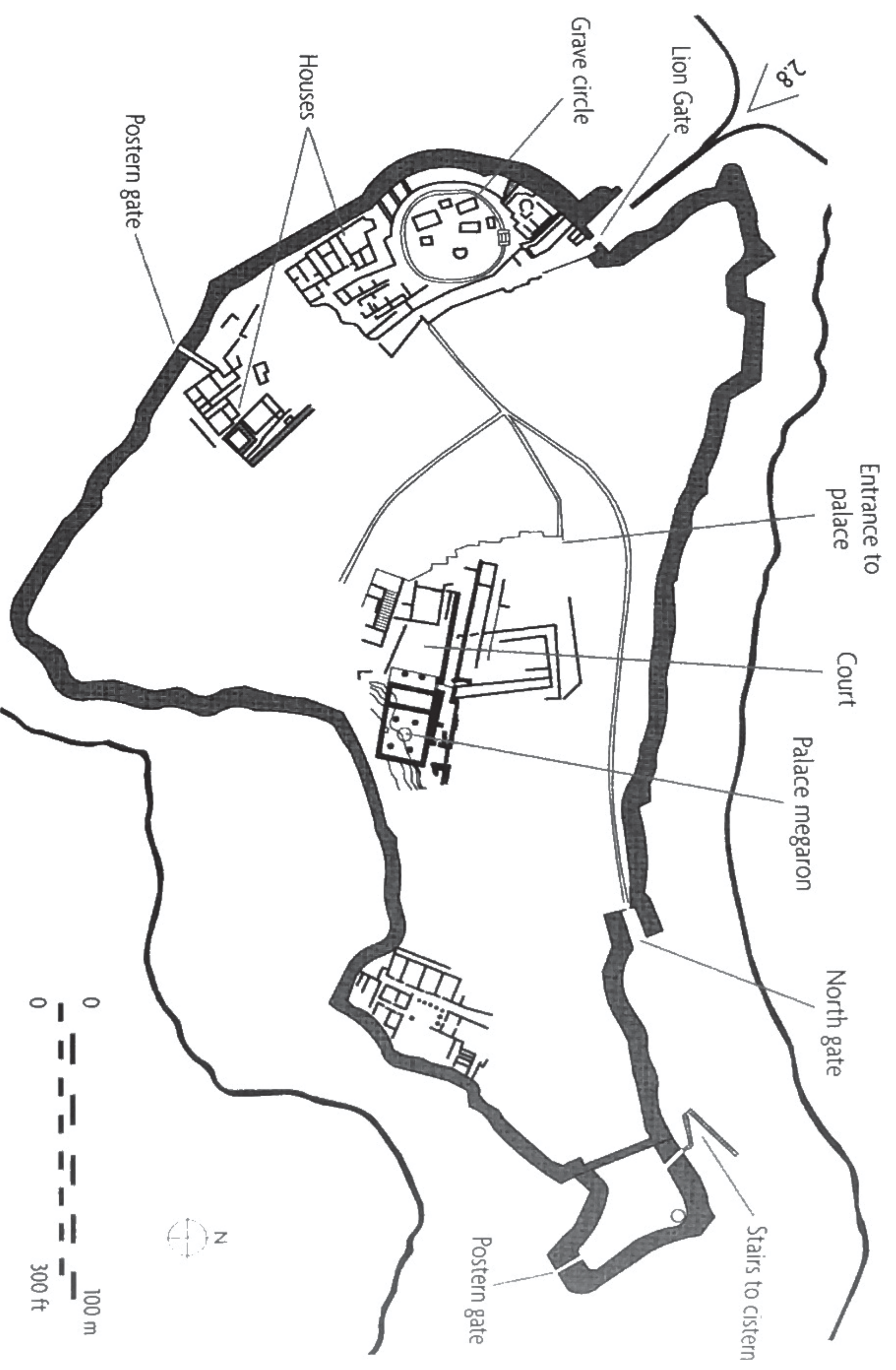


2.5 Ruins of Mycenae, ca. 1600–1250 BCE:

This fabled city was strategically situated to control major transportation routes in the vicinity. The enclosing wall is composed of roughly shaped boulders. Ruins of the palace can be seen at the high point of the site.

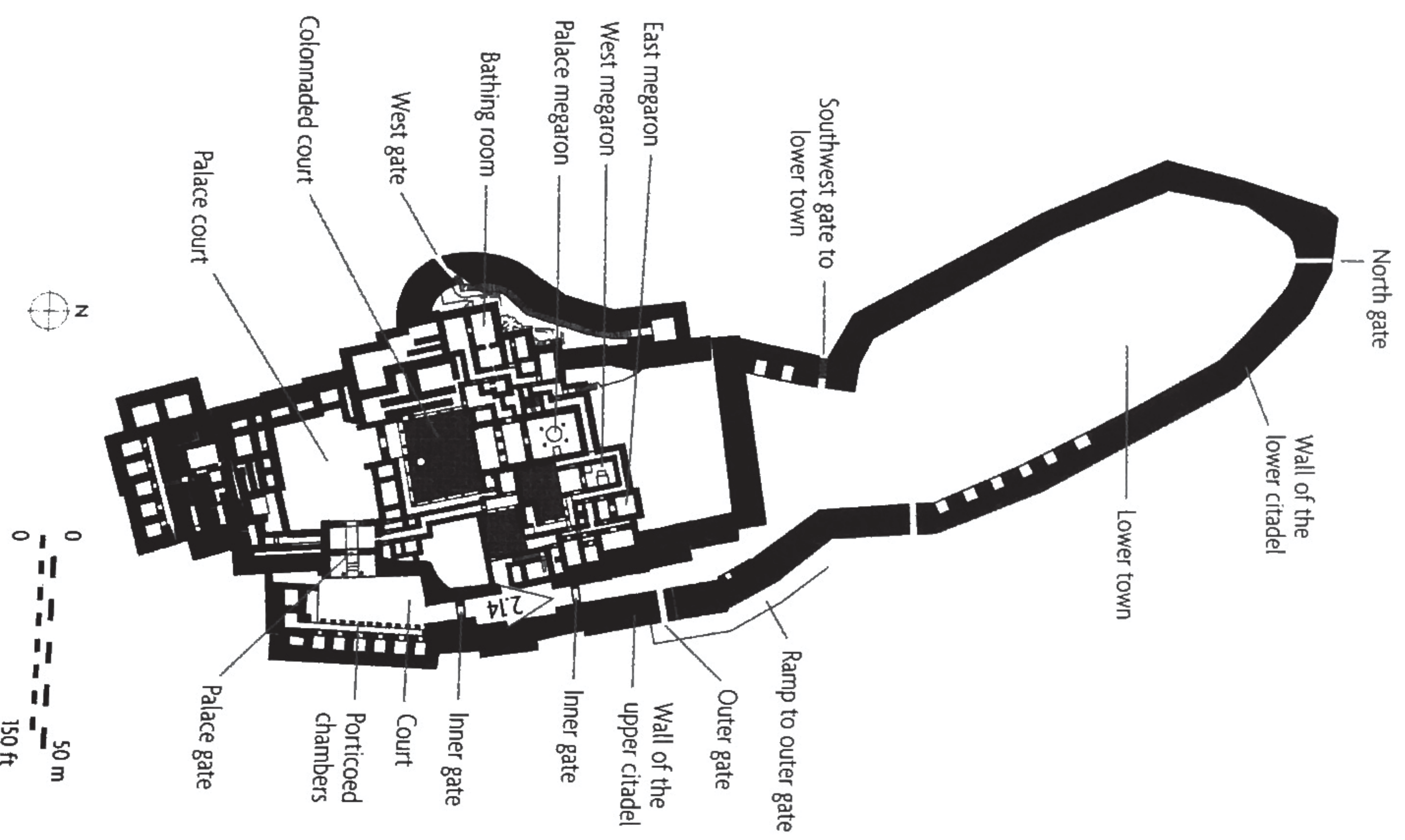
2.6 Site plan of Mycenae, ca. 1600–1250 BCE:

This incomplete plan shows areas that have been excavated. Notice how the fortifications' walls extend to provide additional protection at the Lion Gate and the secondary gate on the north side. The palace megaron, one of the largest rooms in the city, is located at the center.



2.7 Plan of Tiryns, ca. 1300 BCE:

The palace section is located on the southern end, where two megarons can be seen, and the northern extension enclosed the lower citadel. The entrance ramp along the eastern side passed through two fortified gates and between high walls that served as fighting platforms.



stones support a fourteen-ton lintel across the opening, above which is a corbeled arch. The space of the arch is filled by a triangular stone with relief sculpture of two lions with their forefeet on an altar bearing a column of the tree cult. (Mesopotamia had a tradition of venerating trees.) The lions' heads are missing; they were carved separately and attached with dowels, the holes for which are still visible. Even in its damaged state, however, the Lion Gate verifies contact by its creators with the Minoan world, for the column of the tree cult is unmistakably the same as the column used at Knossos. To the north stands a second, smaller gate of the same age as the Lion Gate but without sculpture. There are also inconspicuous back entrances or postern gates built to provide access to a cistern and to provide outlets in case of emergency.

Beyond the Lion Gate are the remains of shaft graves where Schliemann uncovered so much golden treasure. Originally these lay outside the citadel walls, but when the fortress was enlarged the grave circle was carefully incorporated into the fortified area. The administrative and ceremonial spaces that lay beyond exist only as ruins, but from remaining foundations it appears that the palace at

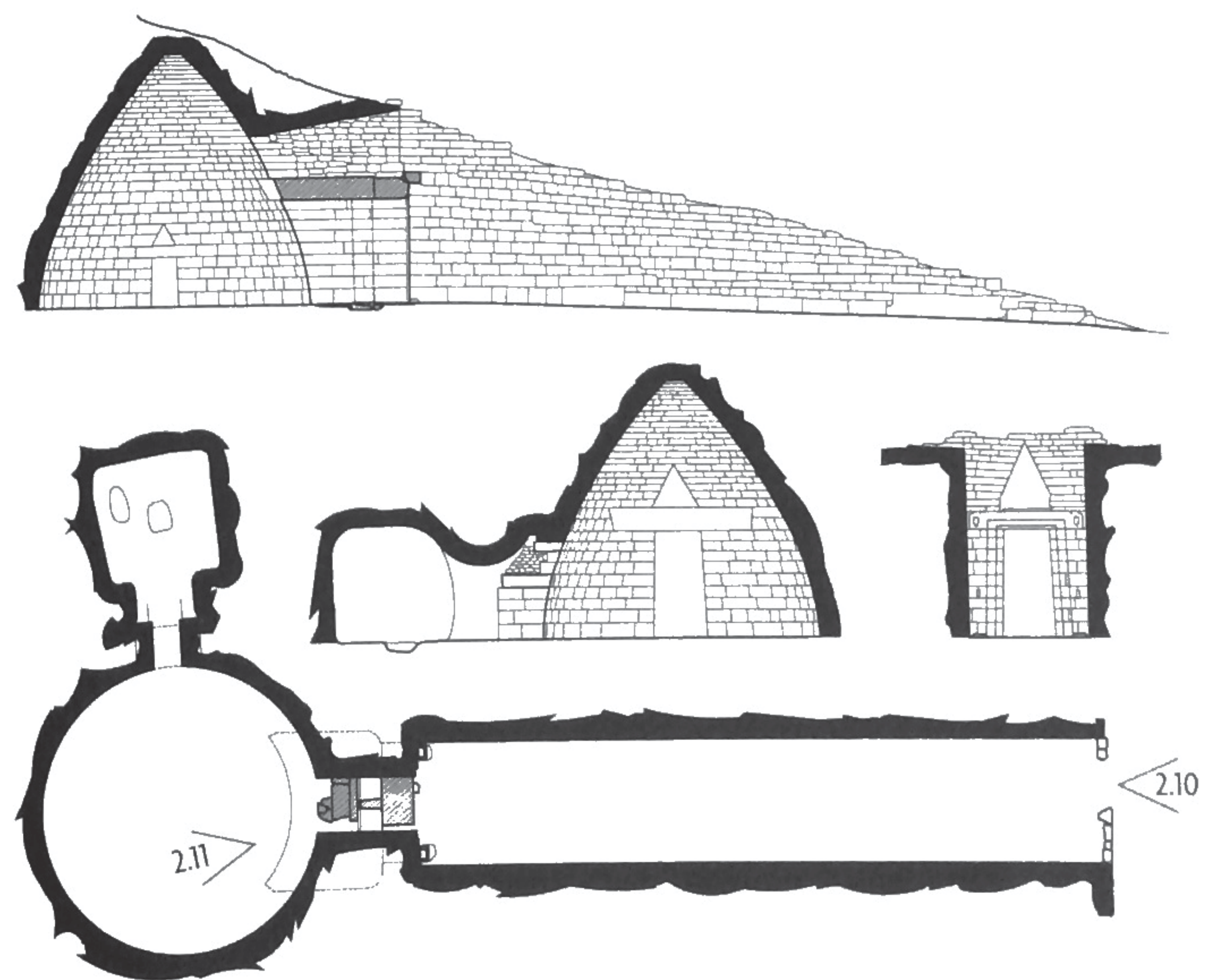


Notice that the carved lion figures flank a column of the tapered type seen at Knossos. The use of guardian beasts associated with royalty links Mycenae with both Hittite and Egyptian traditions.

the highest elevation of the hill had many features derived from Crete, including a megaron as the major ceremonial space. Homer used this term to describe a large palace hall (hence Evans's use of the term at Knossos for the Queen's Megaron). In architectural usage, the word "megaron" is generally reserved to describe a simple rectangular space (*domos*) having solid long walls without openings and an entrance in the center of one short side, generally with an attached anteroom (*prodomos*) preceded by a court (see Fig. 2.12). It is an elementary house form still employed in Mediterranean countries, and the precursor of the classical temple and it has even been used by twentieth-century architects including Le Corbusier in his Citrohan houses (see Fig. 15.50). At Mycenae, the palace megaron is the largest room, roughly forty feet square. Bases for the four columns that supported the roof are still visible, as is the central hearth. This part of the palace was built in part on fill, supported by a retaining wall, and there is still a splendid view out over the valley from the court in front of the megaron. To the north, a smaller room with a stuccoed pool has been identified as a bathing room which legend associates with the murder of Agamemnon on his triumphal return from Troy.

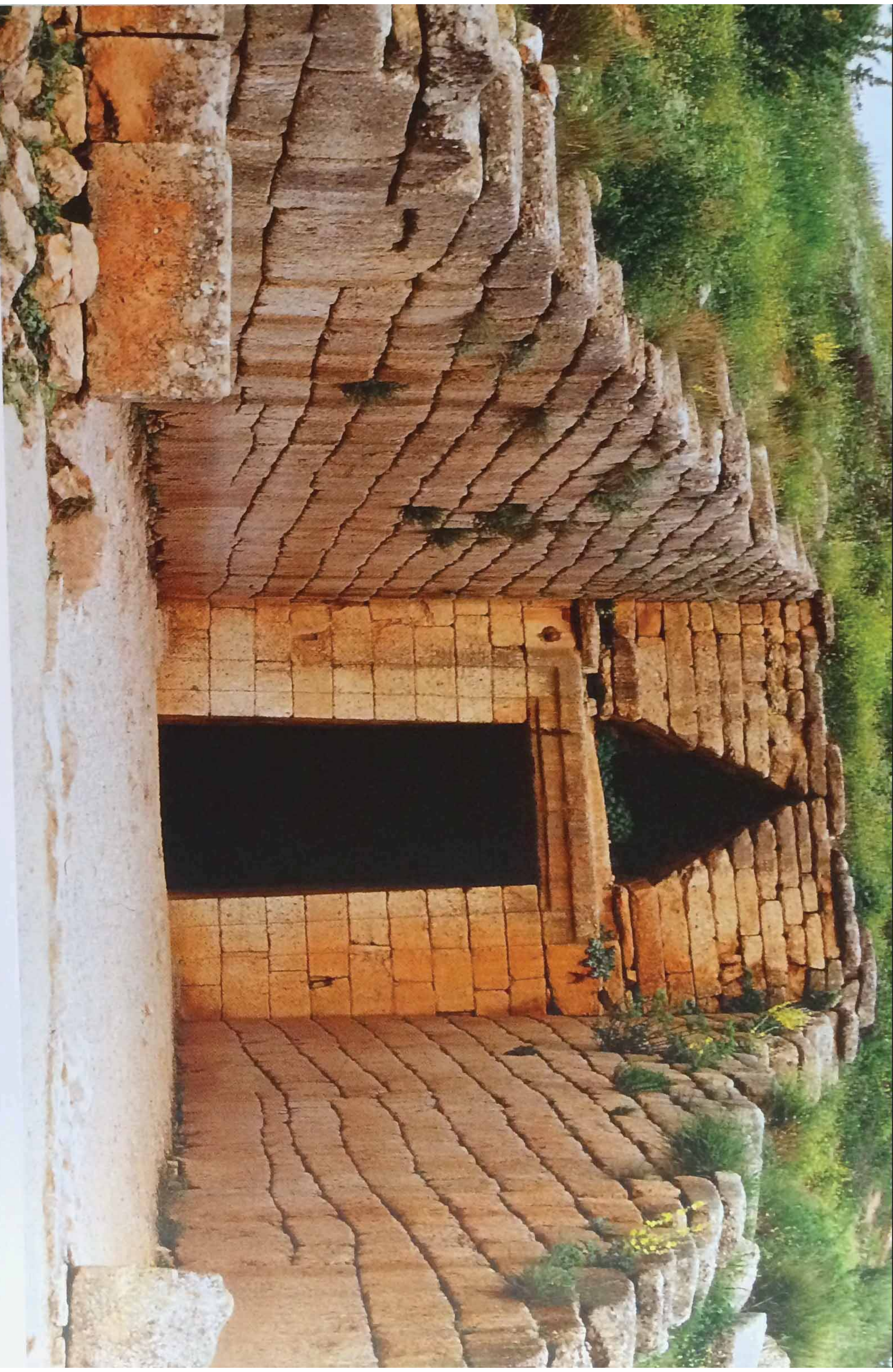
The citadel at Mycenae was surrounded by smaller settlements, perhaps comprised of extended family groups who lived in houses closely associated with the tombs of their ancestors. Nine of these tombs in circular form (*tholoi*) have been found in the neighborhood of

Mycenae: of these, the largest and best preserved is the **tholos** or beehive tomb commonly called the Treasury of Atreus (ca. 1330 BCE) (Figs. 2.9–2.11). It is a corbeled stone chamber rising forty-four feet in thirty-three horizontal courses from a circular plan forty-eight feet in



2.9 Plan of and sections through the Treasury of Atreus, Mycenae, ca. 1330 BCE.

This corbeled tomb assumes the shape of a beehive. Its construction may be compared to the tomb at Er-Mane and the passage grave at Newgrange (see Figs. 1.2–1.3). The function of the side chamber is unknown, but it may have been used for burials.



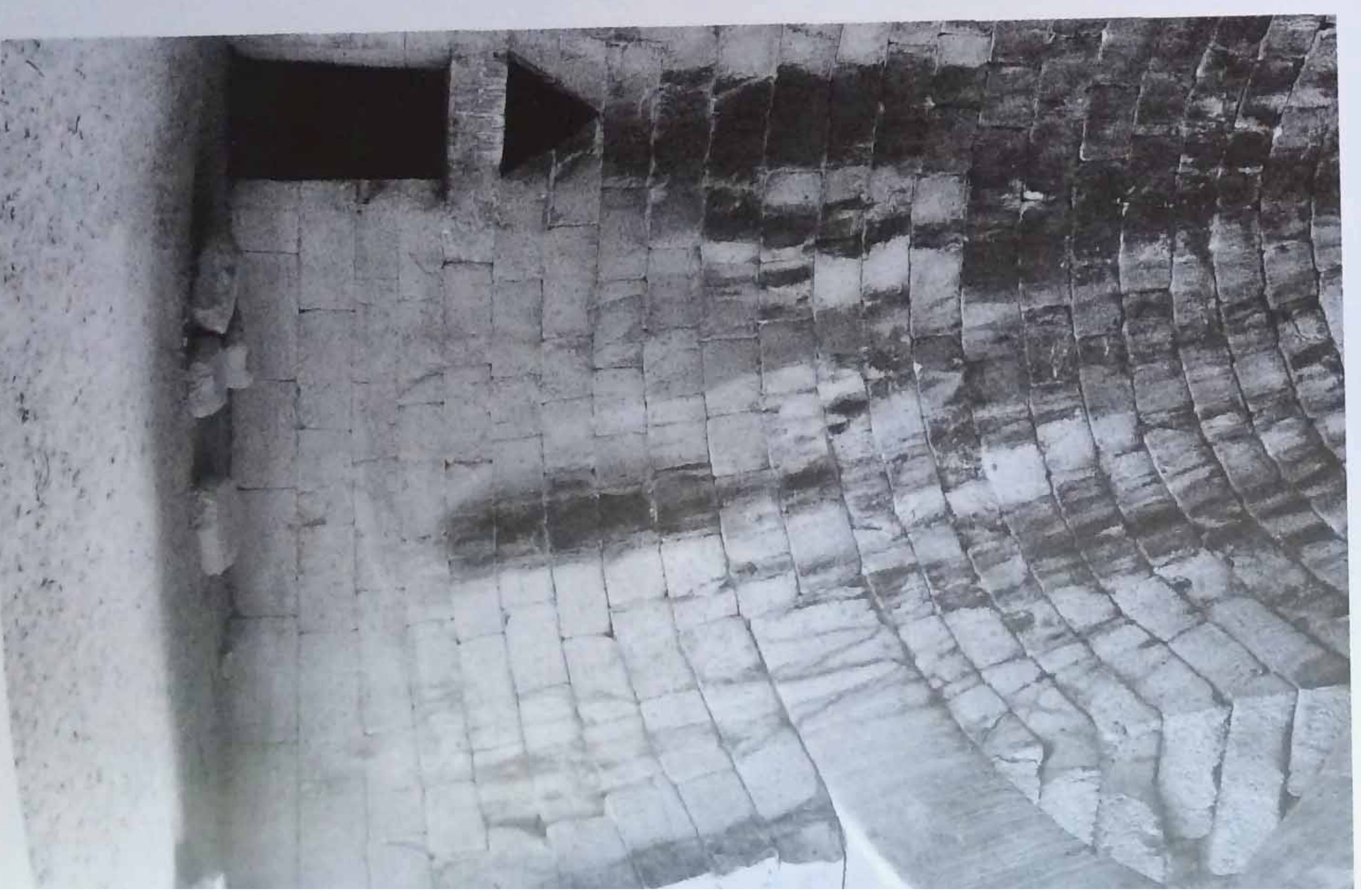
2.10 Facade and dromos of the Treasury of Atreus, Mycenae, ca. 1330 BCE.

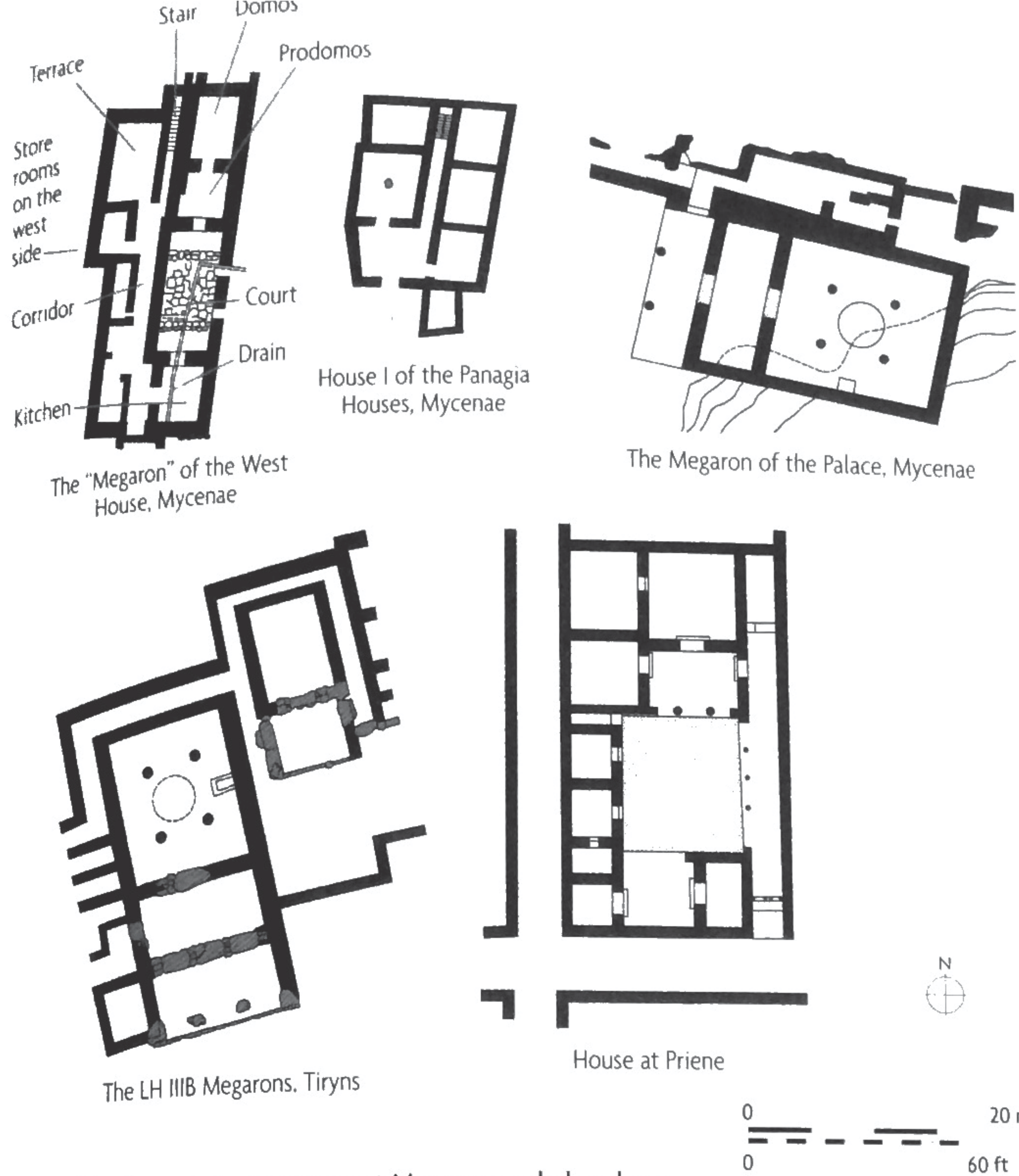
This axial view shows the stone-walled dromos and the triangular corbelled relieving arch that diverts weight away from the massive lintel stone. Ornamentation and paint that originally decorated the exterior have disappeared.

2.11 Interior of the Treasury of Atreus, Mycenae, ca. 1330 BCE.

Although the interior space is relatively large, it is also dark, deriving its light only from the open doorway and triangular transom of the corbelled arch above it. The even courses of ashlar, or shaped, stones can be compared to the irregular cyclopean stones used elsewhere at Mycenae.

diameter, with a small chamber to the right of the entrance. All the stonework, except for the stone-walled dromos, or entrance way, is covered by an earthen mound, whose weight adds stability to the dry masonry. The corbelled construction employed here is the same technique used by prehistoric megalith builders in northern Europe and by Egyptian masons as early as the Fourth Dynasty. Originally the entrance doorway was elaborately decorated, and there is evidence that the interior was embellished with bronze plates. Whatever the tholos contained in the way of burials or goods for the afterlife disappeared long ago.





2.12 Plans of the megarons at Mycenae and elsewhere.

The West House, located just outside the walls at Mycenae, combines a courtyard porch, antechamber, and megaron. The palace megarons at Mycenae and Tiryns are considerably larger, both with remains of the four column bases that supported the roof around a central hearth.

Some of the houses outside the citadel have been excavated, and their remains provide an indication of what the dwellings of this period were like. Near to the Treasury of Atreus are the foundations of four closely grouped residences, of which the West House provides the easiest plan to interpret, as its main floor (rather than the basement) is preserved (Fig. 2.12). Entrance was made into a court, probably open to the sky, off which there is the three-room megaron sequence of porch, **vestibule**, and domos as the major spaces of the house. Off a corridor extending along the west side are a series of small rooms and a larger terrace that was probably unroofed. Stairs at the end of the corridor led to an upper floor whose layout cannot be determined, as the house was destroyed in antiquity by fire. The roof was probably flat, and both it and the upper story were framed in wood, which accounts for the survival of only the rubble stone foundations. Except for the court area, which was paved with stone, all the floors were of clay. A large drain extends across the court and exits under the foundation of the east wall, while a lesser drain is located in the megaron's domos. The use of the small rooms off the corridor has been determined from pottery and clay tablets found in them: all were storerooms, except for the chamber directly off the court, which had both a hearth and drain and was probably the kitchen. It is surmised that the house belonged to wealthier persons engaged in the manufacture of scented oils, for which Mycenae was famous. While not all Mycenaean houses had megaron layouts, the form is commonly enough

encountered for the West House to be considered a typical design.

A megaron layout on a grand scale is found in the palace at Tiryns, where the citadel sits atop a limestone ridge protected by a massive wall of cyclopean masonry that dates to the fourteenth century BCE (see Fig. 2.7). After a fire destroyed the citadel in ca. 1300 BCE, the whole was rebuilt to its present outline, including enclosure of the lower citadel with a twenty-five-foot-thick wall. An earthquake and fire in the mid-thirteenth century BCE damaged the complex, leading to the construction of the buildings whose remains are visible today. The surviving walls around the upper citadel vary from sixteen to fifty-seven feet in thickness. Like Mycenae, the citadel at Tiryns had several postern gates through which people inside could slip out unobtrusively. Corbeled galleries built into the thickness of the walls on the southeast side are handsome examples of such masonry construction (Fig. 2.13).

2.13 Corbeled gallery, Tiryns, ca. 1300 BCE.

These passages, built within the thickness of the fortified perimeter walls, provided access to guard chambers or postern exits for emergency use.





2.14 Inner gate at Tiryns, ca. 1300 BCE.

This view shows the impostes of one gateway. Although the portals' gates are now gone, their positions can be seen in the cyclopean masonry. Attackers who made it this far would have been at the mercy of Mycenaean soldiers above and on both sides of them.

The approach to Tiryns has a more strongly defensive design than the entrance to Mycenae. An almost single-file passage beside and then between the walls made would-be attackers vulnerable well before they reached the first of two inner gates (for which the portals are gone) (Fig. 2.14). Beyond the second gate was a court bounded by porticoed chambers corbeled into the mass of the wall. These face the relatively narrow palace gate that opens into a palace court which connects on the north to a colonnaded court then to the palace megaron of porch, antechamber, and domos (see Fig. 2.12). As at Mycenae, four column bases surround the substantial central hearth, indicating the location of the roof and its opening to let out smoke. Fragments of wall paintings depicting processions of women and the hunting of boars were found in the excavations. A smaller megaron located to the east has an outer and inner court preceding the domos. Tiryns was again devastated by an earthquake in about 1200 BCE.

Between 1200 and 1100 BCE, Mycenaean settlements declined, perhaps in the face of invasions by nomadic peoples from the east, the Dorians and the Ionians, pushing down into the peninsula of Greece. The invaders used mounted cavalry with iron weapons that may have enabled them to defeat the Mycenaeans who had only bronze armor. Several centuries of cultural obscurity followed, during which the invading tribes settled down, mastered the art of writing, and assimilated certain aspects of Mycenaean culture and mythology as their own. Out of the confusion of this "dark age" rose the brilliance of Classical Greece.

GREECE: THE ARCHAIC PERIOD

During the "dark age," population on the Greek peninsula began to exceed the land's limited agricultural possibilities, where only relatively narrow strips along the coast and in the river valleys could be productively farmed. Seeking additional farmland, as well as looking for metal ores and new trading opportunities, the city-states began a program of colonization, establishing new towns around the eastern Mediterranean in Asia Minor, Sicily, southern Italy, and North Africa. These colonial settlements were laid out in an orderly fashion, generally in elongated rectangular blocks grouped around the market and temples at the center of the city. There were public facilities for recreation and entertainment, and a protective wall surrounded the whole colony.

In addition to grid-plan towns, the major contribution to architectural history made by Greek architects and builders during the Archaic period (ca. 700–500 BCE) was the temple, which originated as a home for the gods and was based on the design of the Mycenaean megaron so that its plan consists of a rear room, or *opisthodomos*, then a *naos*, or *cella*, then a front porch, or *pronaos*. Judging from small surviving clay models, the early temples were simple one-room structures, built to accommodate a statue of the deity. They had a covered portico or porch at the entrance; walls were made of mud-brick, and the sloping roof was made of thatch. In the eighth century BCE, the small Temple of Artemis at Ephesus was constructed with wooden columns surrounding the temple chamber (**peripteral columns**), giving it additional distinction and a strong sculptural quality. The Temple of Hera at Olympia (ca. 600–590 BCE) continues this same idea at a larger scale (Fig. 2.15). Here the original wooden columns were replaced with stone, perhaps to provide better support for fired-clay roof tiles that were significantly heavier than thatch. The transition to stone construction appears to have been a gradual process, doubtless influenced by Egyptian precedent and technology. Stone column shafts in Greek architecture are characteristically fluted (incised vertically with concave grooves) in a manner similar to Hatshepsut's mortuary temple at