

## Abstract (Overview)

### Aegean civilization (2800–1100 BC)

Three significant elements dominated our examination of Aegean architecture: palaces, citadels and tombs.

In both **Crete and Mycenae**, palaces were important architectural elements. The organization and form of the palaces however differs between the two civilizations. In Crete, palaces were complex multifunctional, multi-story buildings. They were designed to be colorful, relaxed and joyous in nature, reflecting the peaceful lifestyle of the people, while in Mycenae, palaces were single story, organized around a simple rectangular kingly residence, the megaron that is accessed through a series of courtyards.



Gypsum, cut stone and Timber were the principal building materials of the Aegean. Gypsum was common in Crete, while limestone was common in Mycenae. Timber was not very common in both locations. In Crete, gypsum was preferred for wall and frescoed decoration, while timber is used for columns and roofs. In Mycenae, cut stone was the most common material which was used with wooden frame for houses or in cyclopean construction for citadels.

# CHAPTER I

## Introduction

**Aegean civilization (2800–1100 BC)** is a general term for the Bronze Age civilizations of Greece around the Aegean Sea.

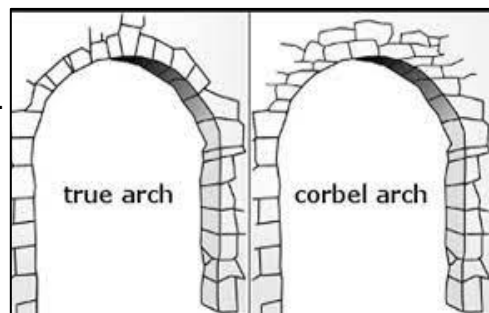
The Character of Mycenaean Architecture is very different from the Hellenic Architecture, consists of rough walling of large blocks of stone, often unworked. Three significant elements dominated our examination of Aegean architecture: palaces, citadels and tombs.

Ancient Aegean art and architecture was created primarily by three cultures: Cycladic peoples, the Minoans, and the Mycenaeans.

- The Cycladic culture existed from 2600 to 1100 BC. These people lived on a group of islands called the Cyclades that included Santorini and Naxos. Scholars don't know much about them, but archaeologists have found examples of their art. Cycladic art is very geometric (angular with basic shapes), almost all three-dimensional sculpture, and centered on depictions of the female figure. Many are carved from marble and were found in graves. Scholars have speculated that they might be related to fertility beliefs and funerary practices, but their true meaning and purpose are unknown. Cyclades are a complex of islands emerging from the deep blue Aegean Sea, forming a circle around the sacred island of Delos. They are considered to be the pearl of the Greek islands, featuring idyllic landscapes that allure visitors from all over the world.
- Minoan culture developed on the island of Crete and existed from 3000 to roughly 1400 BC. They were seafaring people who gained great wealth from trade throughout the Mediterranean. Minoans were also sophisticated and creative. They invented an early form of writing and built large complex palaces with multiple stories, staircases, colonnades (long series of columns with a roof overhead), bathing rooms, indoor plumbing, and even spaces for theater performances and public spectacles.
- Mycenaean culture flourished on the Greek mainland in the Late Bronze Age, from about 1600 to 1100 B.C.E. The name comes from the site of Mycenae, where the culture was first recognized. Besides being bold traders, the Mycenaeans were fierce warriors and great engineers who designed and built remarkable bridges, fortification walls, and beehive-shaped tombs—all employing Cyclopean masonry—and elaborate drainage and irrigation systems.

### Most prominent elements in masonry arches:

1. corbel system,
2. inclined blocks over openings, and the true arch.



### 3 types of masonry walls

1. Cyclopean- masses of rock roughly. quarried and piled on each other, without cramp-irons, but with clay mortar, the interstices between the larger being filled with smaller blocks.



2. Rectangular- carefully hewn rectangular blocks arranged in regular courses, but the joints between stones in the same course are not always vertical.



3. Polygonal- many sided blocks accurately worked so as to fit together



## CHAPTER II

### Cycladic, Minoan and Mycenaean Architecture

#### The Cycladic Architecture

2600 to 1100 BC

Cycladic islands seem to be designed by the hand of the same artist, sitting in harmony with their natural site reputation that goes well beyond the borders of Greece. They are characterized by a scenery variety of steep mountains, vineyards, churches and picturesque white painted villages on top of impressively high cliffs.

Each one of them has its own unique characteristics, determined by its history, topography and geology but they all seem to be bound together by their architecture. Cycladic architecture is famous for its uniqueness and charm, providing the islands with minimal aesthetics but with a daring style.



The most prominent characteristic of this architectural style is the whitewashed cube houses built next to and on top of one another. Their smooth-edged corners give out a sense of space and freedom, as the air is delicately carving them year after year.

Their aesthetics wasn't the main purpose for their construction though, since the former inhabitants of the islands were looking for ways to get protected from the strong winter winds and the intense solar exposure during the summers

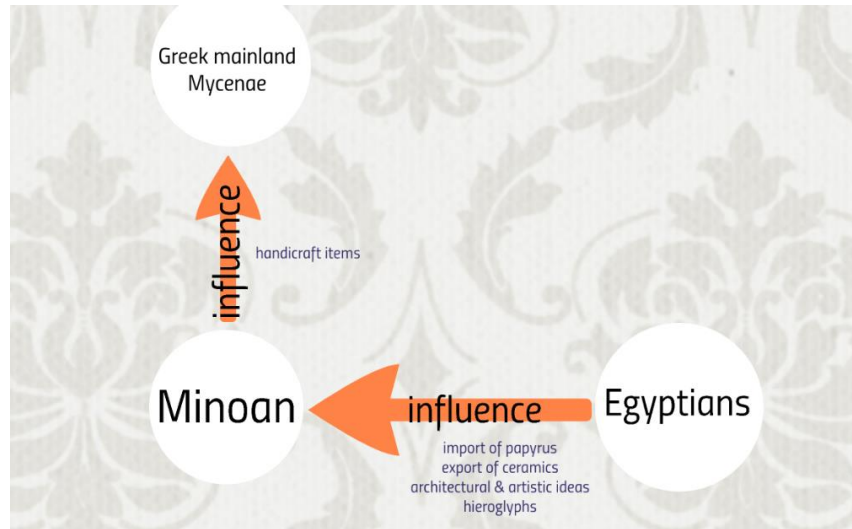
#### The Minoan Architecture

(3000 - 1400 BCE)

Minoan civilization was the first to flourish among the Aegean civilizations and named after King Minos, Minos was the great king of Ancient Crete, which was the center of the Greek world before Athens.

Remains of this civilization are, townhouses, and palaces. The Minoans were traders and seafarers. The society can be thought of as being made up of near divine kings presiding over an administration largely concerned with commerce. The Minoans were a very rich and prosperous society. The wealth of the society was reflected in the building of palaces as the residences of the powerful rulers who controlled the town in which they were built. Minoan cities did not have city walls, which suggest that they were a relaxed, peaceful and easygoing society. Apart from palaces, Minoans also built many small country houses scattered over the countryside and several towns of which the one attached to the palace of Knossos achieved considerable size. Buildings were aligned with their surrounding topography, like mountains in relation to the sacred or ritual significance of the mountain





### The Columns:

The columns of the Minoan architecture are unique because they are wider at the top than the bottom. The Minoan column was constructed from the trunk of a cypress tree, common in the Mediterranean. It is called an 'inverted' column because most Greek columns are wider at the bottom, creating an illusion of greater height. The columns were also made of wood as opposed to stone, and were generally painted red. They were mounted on a simple stone base and were topped with a pillow-like, round piece as a capital.



Archeological excavations essentially discovered how the buildings were arranged in plan at the ground level with no concrete knowledge of how the upper floors of the buildings are organized.

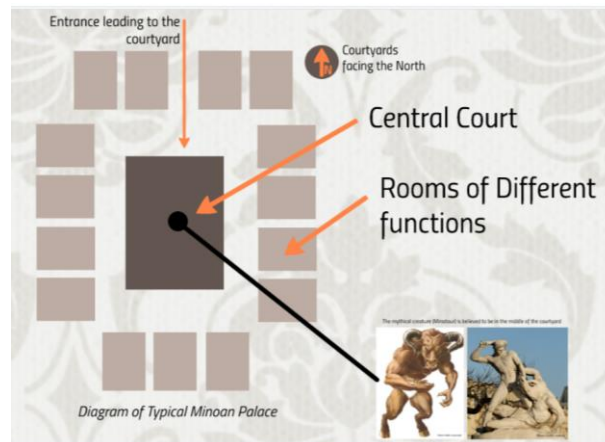
In design, the palaces resemble each other but still preserve unique features. They were multi-storey buildings, with interior and exterior staircases, light wells, massive columns, storage magazines, and courtyards.

Function rather than form appears to predominate in their organization. The most striking feature of the palace is the extraordinary number of rooms they contain. There were rooms of different types, sizes and functions organized around a central courtyard, they served as centers of government, administrative offices, shrines, workshops, and storage spaces. The courtyards were aligned north-south, the reason for which is not clear. All the palaces have multiple entrances, most of which led to the courtyard. The palaces do not also suggest informal principles of planning or design. Their organization is more or less organic in nature, suggesting gradually growth.

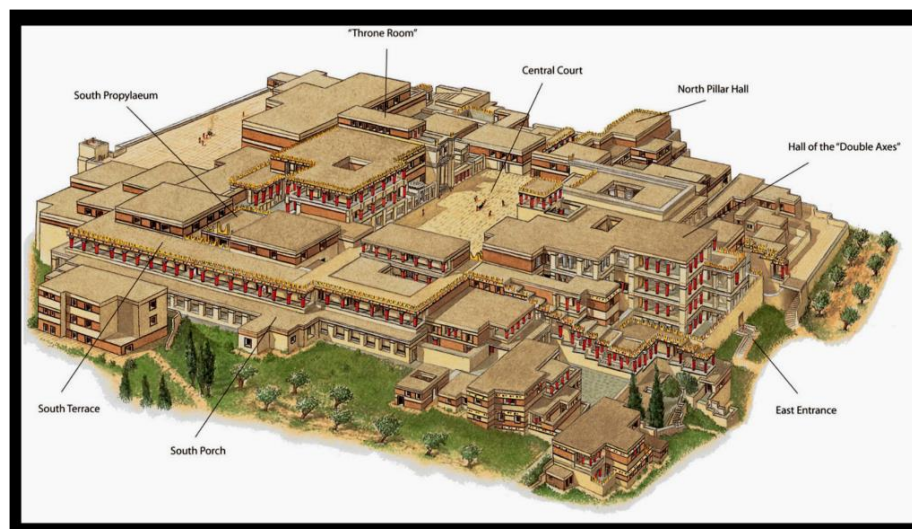
Examples of palaces: Knossos, Phaistos, Malia, and Kato Zakros

The Minoan cities were connected with stone-paved roads, formed from blocks cut with bronze saws. Streets were drained and water and sewer facilities were available to the upper class, through clay pipes.

Minoan buildings often had flat tiled roofs; plaster, wood, or flagstone floors, and stood two to three storeys high. Typically, the lower walls were constructed of stone and rubble, and the upper walls of mud brick. Ceiling timbers held up the roofs. The materials used in constructing the villas and palaces varied, and could include sandstone, gypsum, or limestone.



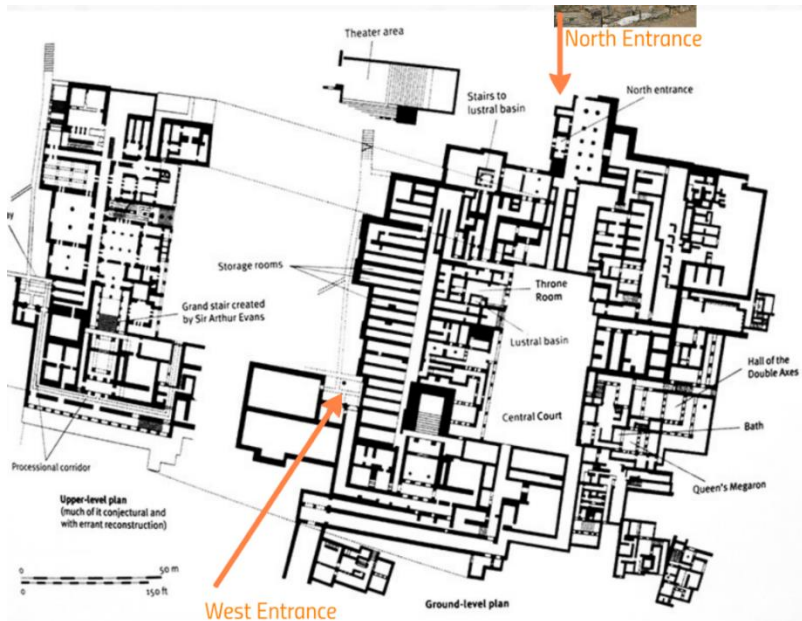
## Palace of Knossos



Palace of king Minos and was the largest and most elaborate of the Minoan palaces. First palace to be discovered and excavated by the British archeologist Sir Arthur Evans. Only the ground floor of a large palace of several stories has partially survived. The site is complicated and there are controversies about its functions as the upper floors have remained impossible to reconstruct with certainty. It was a residence, a religious and an administrative center; The King

was Crete's high priest. The plan suggests it evolved organically around the central courtyard. The palace covered an area of 10 square kilometers, and it was at least two storeys high.

The various functions of the palace were not distributed in distinct areas. Functions were gathered in chambers and apartments spread around the central courtyard. The palace had two prominent entrances, one on the north face and another on the west side. The north entrance appears to be the main entrance and is defended by a guardhouse. The western entrance was indirect and organic (dog-leg) in form.

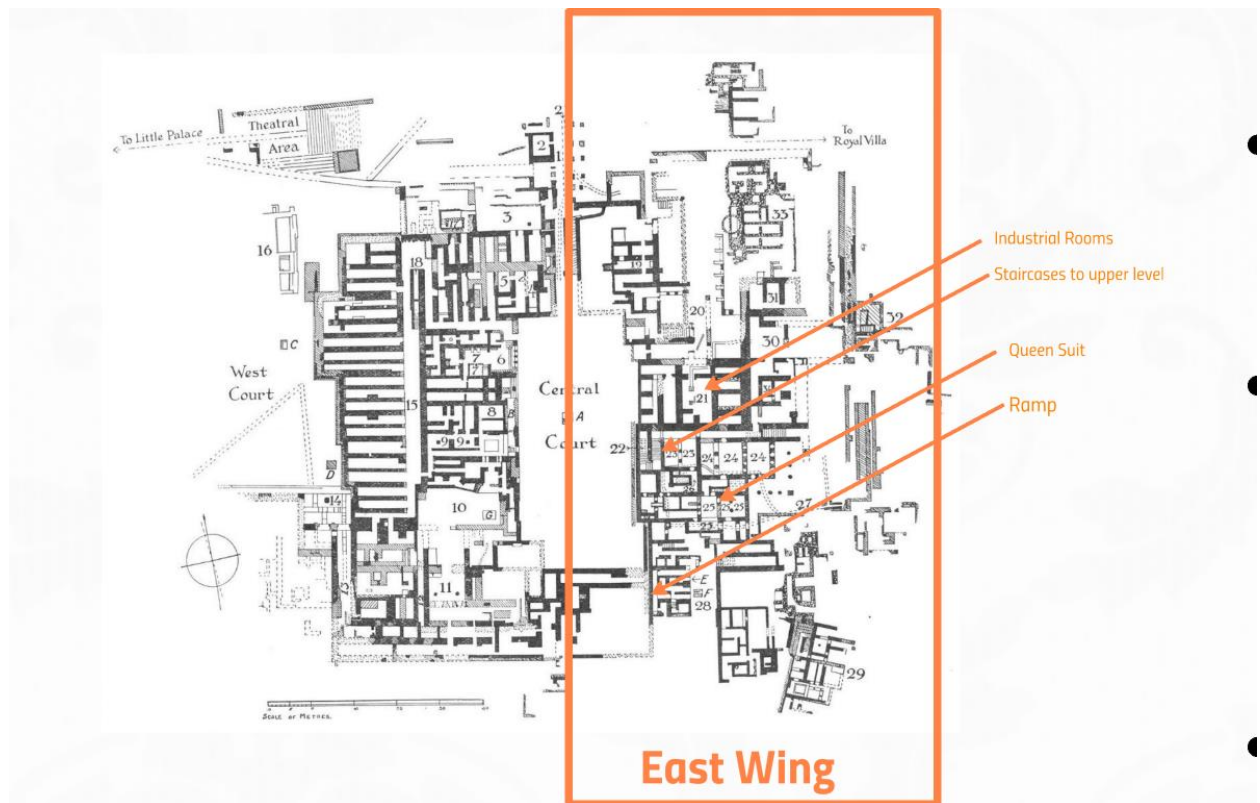


#### General Characteristics:

The palace did not embody any idea of monumentality or conceptual order. Rather it was picturesque, colorful with an atmosphere of comfort and informality. The building materials of the palace were rich; Wood and gypsum were extensively used to achieve fine bright surfaces. Wood was used to erect widely space columns to support lightweight wooden roof

The columns taper upward and had round capitals. The perishable nature of the materials has made materials not to survive to the present. None of their columns has survived. All the information on it is derived from paintings on walls. Cretans loved color and painted their walls and adorned them with relief, mostly of sea animals suggesting that they probably worship nature. The stairways light wells, and colonnades of downward tapering wood columns were typically Minoan. They also elaborated and developed sanitation and drainage, example of which is found in the Queen's suit





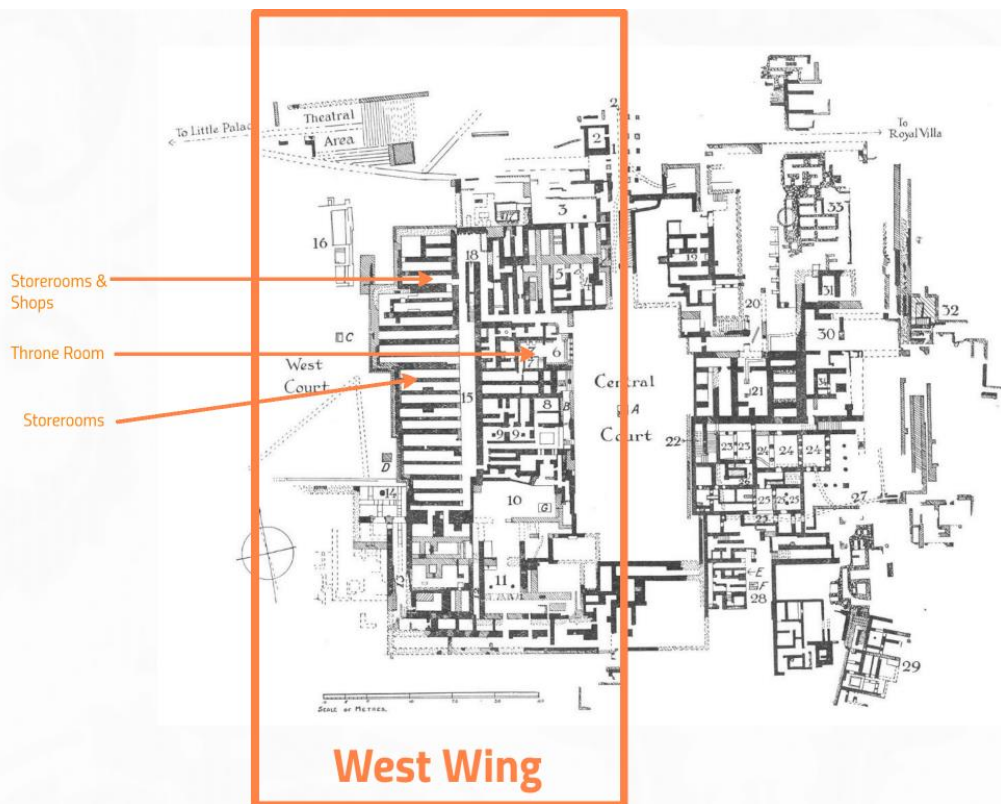
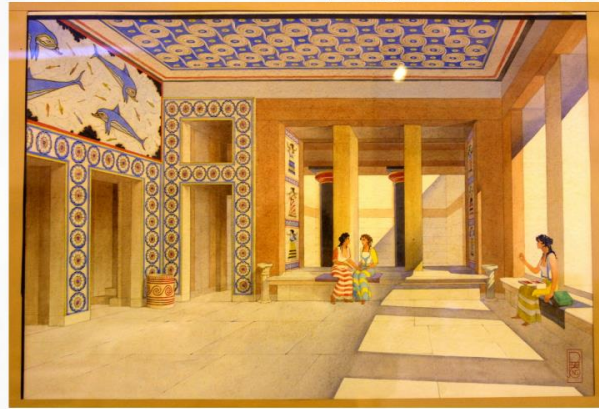
## East Wing

The bulk of the northern part of the East wing was used for industrial activity. Industrial activities included jewelry and pottery making, and other light industries. Towards the southern part of the East wing is found the Queen's suit. The queen's suit boasted a bathroom with a sophisticated drainage system of earthenware pots fitted together. A staircase and a ramp lead from the ground floor of the east wing to the upper floors. Archeological evidence suggest that the main living apartments were on the upper levels of the east wing





## Queen's suit



## West Wing

Most of the western wing was devoted to storage. The storage rooms were in long and narrow shops found against the western wall. The storage rooms were for oil jars and probably granaries. The throne room was dark and mysterious; the stone throne was against the north wall,

flanked by benches. The walls were decorated with paintings of sea animals. The decorations appear to have a religious purpose rather than royal one. A magnificent staircase in the west wing led to staterooms on the upper floors. Rooms were generally approached through rows of double doors so that they could be opened, or totally or partially shut off. Everything was designed to permit the circulation of cool air, to counteract the intense heat of the Cretan summer. Staircases also designed to have light wells; these were opening in the roof that admits light into the staircase.

WEST WING



The "Throne Room" with its gypsum throne and benches built to accommodate sixteen people

## Mycenaean Architecture

1600 - 1100 BCE

In Mycenae, the location was open to attack and architectural form responded by emphasizing defense. The emphasis on defense meant that movement in the citadels is directed through a maze to the megaron to ensure optimal protection. The focus on palaces stems from

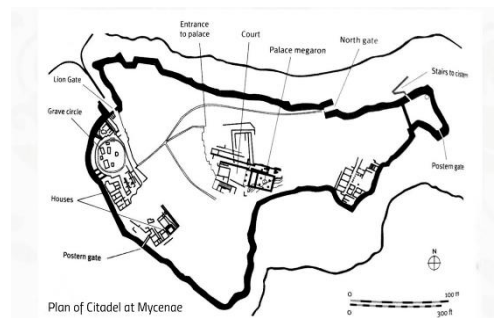
the power and authority of the king in both civilizations, which is expressed in palace construction. In Mycenae there is also evidence of some conscious application of aesthetic principles in the design of the tholos (tombs). The geometrical relationships between the diameter and height of the tholos points to some conscious formal organization of form. The Mycenaean generally tended to adapt, rather than destroy, Minoan culture, religion and art. They continued to operate the economic system and bureaucracy of the Minoans.

The Mycenaean people were Greek by race. The Mycenaean kingdom was small and lacked protection and buffer zones to protect the capital. The people of Mycenae were also more of a society of warriors than traders, which the Cretans were. Their architecture focused on defense on a grand scale. The Mycenaean people built fortified kingly palaces located within Citadels instead of the pleasure palaces of the Cretans. The citadels were usually built along the edge of sharp change in elevation, on hilltops to make them difficult for would-be-attackers. The citadels were organized royal living areas enclosed by huge cyclopean walls or roughhewn immense stone blocks. The highest degree of sophistication in citadel construction was achieved at Mycenae and Tiryns.

Of the two sites, Tiryns is better preserved. The two citadels were essentially similar and might have been constructed by the same workmen

### Infrastructure/Civil Buildings

The palaces were located within fortified citadels, pointing to the defensive orientation of the people. Citadels and Tholos were restricted to the Mycenaean civilization. Citadels were built on hilltops to fortify and protect kingly residences. They also provided a refuge for the common people during periods of attack. The citadels incorporated systems of defense and access to water in case of siege.



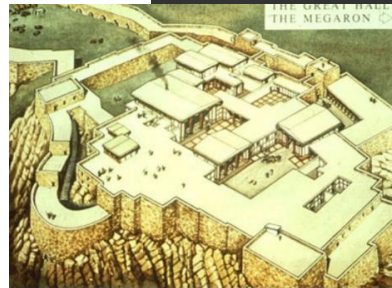
### The Citadel at Mycenae

1350 -1250 BCE

Mycenae, inaccessible, easily defended, stands midway between Corinth and Argos on the eastern part of the Peloponnese. The gate consists of great upright stones 3.1 meter high supporting an immense lintel 4.9 meters long and 1.6 meters high. The lintel defined a gate 2.4 meters deep with an opening of 3m wide. Above the lintel is a triangular shaped corbeled opening filled with a stone panel bearing a carved relief depicting two rampant lions facing a central column of the downward tapering type.

The column was the sacred symbol of the earth that the lions supposedly protected. The triangular relief carving over the front is to herald the temple front of the Greek civilization





Aerial view of the citadel at Tiryns, Greece, ca. 1400–1200 BCE.

Casemates, or covered galleries, protected and concealed troops within the wall. There were also tunnels within the walls that provided access to water sources beneath the hill. The tunnels were cunningly camouflaged where they extended beyond the area enclosed within the fortification wall. Tiryns citadel also had large galleries to the south and east that is used for storing a large quantity of agricultural produce. All the water and food arrangements ensured that the city could withstand attacks by its enemies for a long time without running out of supplies

The fortification walls were constructed in the irregular style of masonry construction termed cyclopean. The citadel had a long narrow approach on the east side with two gates which could be barred. The palace of Tiryns is located within the citadel to the south

Additional vacant land is enclosed on the north side. The royal residence at Tiryns is one of the best-preserved Mycenaean fortifications Tiryns was located on the coast and was in effect a castle, guarding the beachhead that served as the port of Mycenae

The citadel at Tiryns is located on a low rocky citadel hill. It was guarded by an immensely thick wall 11m thick. Although one royalty resided in the citadel, in times of war the vacant land served as a refuge for the community living in the city below. The living quarter and lifestyle of the ruler is not much different from that of the other feudal barons. All the principal apartments were located on a single floor, they were made up of a simple rectangular box with a single door called megaron

The Rectangular house of the ruler is called the chief megaron. The chief megaron consists of a veranda, entrance hall and throne room. The throne room is entered from the entrance hall, through a door placed axially. In the center of the throne room is a large circular fireplace

Four columns are arranged in a square around the fireplace A throne is located against the middle of the right-hand wall in the throne room. The floors and walls are all painted and decorated. A large court lies directly in front of the chief megaron. The Megaron courtyard is entered from the citadel gate through a series of corridors, entrance portals and other courtyards.

## **Funerary Architecture**

Tholos were the outstanding tombs of the Mycenaean people. The tholos were round beehive structures that were covered with a dome roof. They were accessed by a long causeway called a dromos. Once a person is buried, the tholos is sealed. They did not function as a funerary chapel in contrast with practices that we examined during the Egyptian periods.

### **Treasury of Atreus**

1330 BCE

#### **Sections of the tholos**

The most splendid of the tholos in Mycenae is the so-called Treasury of Atreus or Tomb of Agamemnon. It was built around between 1330 BCE. The dromos is about 6m wide and 36m long. Its sidewalls rise to 13.7m high. The chamber is 14.5m in diameter and 13.2m high. It is made up of 34 circular courses of masonry. A lateral chamber 8.2m square by 5.8m high was the actual place of burial

The treasury of Atreus exhibited the best masonry and most careful and ambitious construction to be found at Mycenae.



## Sections of the tholos

