

THE PALACE OF MINOS. By Arthur J. Evans, in the *Monthly Review*, Vol. II. January-March, 1901. London.

The Labyrinth of Minos

—A Classic of Science

Archaeology

GUIDED by the unearthed walls, steps and porticoes on the hill above Knossus, the artist has drawn the palace of Minos as Theseus may have seen it, or at least as it was just before the town was deserted. Since the discovery of the ruins, archaeologists have learned that no human enemy, but a destructive earthquake, laid waste this ancient center of civilization. The Minoans thought it was caused by the plunging and bellowing of the angry bull-god. Fear caused them to leave the site forever.

HERE, in his royal city of Knossos, ruled Minos, or whatever historic personage is covered by that name, and founded the first sea empire of Greece, extending his dominion far and wide over the Ægean isles and coast lands. Athens paid him its human tribute of youths and maidens. His colonial plantations extended east and west along the Mediterranean basin till Gaza worshipped the Cretan Zeus and a Minoan city rose in western Sicily. But it is as the first lawgiver of Greece that he achieved his greatest renown, and the code of Minos became the source of all later legislation. . . .

If Minos was the first lawgiver, his craftsman Daedalus was the first traditional founder of what may be called a "school of art." Many were the fabled works wrought by them for King Minos, some grewsome, like the brass man Talos. In Knossos, the royal city, he built the dancing ground, or "choros," of Ariadne, and the famous labyrinth. In its inmost maze dwelt the minotaur, or "bull of Minos," fed daily with human victims, till such time as Theseus, guided by Ariadne's ball of thread, penetrated to its lair, and, after slaying the monster, rescued the captive youths and maidens. . . .

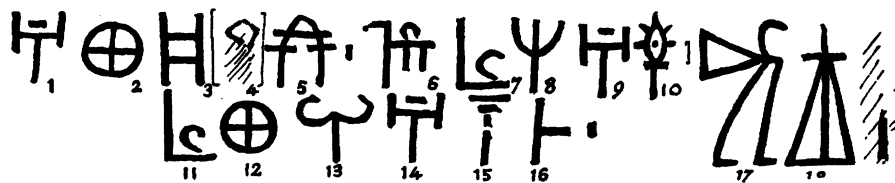
From 1894 onward I undertook a series of campaigns of exploration chiefly in central and eastern Crete. In all directions fresh evidence continually came to light—Cyclopean ruins

of cities and strongholds, beehive tombs, vases, votive bronzes, exquisitely engraved gems—amply demonstrating that in fact the great days of that "island story" lay far behind the historic period. From the Mycenaean sites of Crete I obtained a whole series of inscribed seals, such as I had first noticed at Athens, showing the existence of an entire system of hieroglyphic or quasi pictorial writing, with here and there signs of the coexistence of more linear forms. From the great cave of Mount Dicta—the birthplace of Zeus—the votive deposits of which have now been thoroughly explored by Mr. Hogarth, I procured a stone libation table inscribed with a dedication of several characters in the early Cretan script. But for more exhaustive excavation my eyes were fixed on some ruined walls, the great gypsum blocks of which were engraved with curious symbolic characters, that crowned the southern slope of a hill known as Kephala, overlooking the ancient site of Knossos, the city of Minos. They were evidently part of a large prehistoric building. Might one not uncover here the palace of King Minos—perhaps even the mysterious labyrinth itself?

The Plan of the Palace

The result has been to uncover a large part of a vast prehistoric building—a palace with its numerous dependencies, but a palace on a far larger scale than those of Tiryns and

Mycenae. About two acres of this has been unearthed, for, by an extraordinary piece of good fortune, the remains of walls began to appear only a foot or so, often only a few inches, below the surface. This dwelling of prehistoric kings had been overwhelmed by a great catastrophe. Everywhere on the hilltop were traces of a mighty conflagration; burnt beams and charred wooden columns lay within the rooms and corridors. There was here no gradual decay. The civilization represented on this spot had been cut short in the fullness of its bloom. Nothing later than remains of the good Mycenaean period was found over the whole site; nothing even so late as the last period illustrated by the remains of Mycenae itself. From the day of destruction to this the site has been left entirely desolate. For three thousand years or more not a tree seems to have been planted here; over a part of the area not even a plowshare had passed. At the time of the great overthrow, no doubt, the place had been methodically plundered for metal objects, and the fallen debris in the rooms and passages turned over and ransacked for precious booty. Here and there a local bey or peasant had grubbed for stone slabs to supply his yard or threshing floor. But the party walls of clay and plaster still stood intact, with the fresco painting on them, still in many cases perfectly preserved at a few inches depth from the surface, a clear proof of



how severely the site had been let alone for these long centuries. . . .

The palace was entered on the southwest side by a portico and double doorway opening from a spacious paved court. Flanking the portico were remains of a great fresco of a bull, and on the walls of the corridor leading from it were still preserved the lower part of a procession of painted life-size figures, in the center of which was a female personage, probably a queen, in magnificent apparel. This corridor seems to have led around to a great southern porch or Propylaeum with double columns, the walls of which were originally decorated with figures in the same style. Along nearly the whole length of the building ran a spacious paved corridor, lined by a long row of fine stone doorways, giving access to a succession of magazines. On the floor of these magazines huge stone jars were still standing, large enough to have contained the "forty thieves." One of these jars, contained in a small separate chamber, was nearly 5 feet in height. . . .

On the east side of the palace opened a still larger paved court, approached by broad steps from another principal entrance to the north. From this court access was given by an anteroom to what was certainly the most interesting chamber of the whole building, almost as perfectly preserved—though some twelve centuries older—as anything found beneath the volcanic ash of Pompeii or the lava of Herculaneum. Already a few inches below the surface freshly preserved fresco began to appear. Walls were shortly uncovered decorated with flowering plants and running water, while on each side of the doorway of a small inner room stood guardian griffins with peacocks' plumes in the same flowery landscape. Round the walls ran low stone benches, and between these on the north side, separated by a small interval and raised on a stone base, rose a gypsum throne with a high back, and originally colored with decorative designs. Its lower part was adorned with a curiously carved arch, with crocketed moldings, showing an extraordinary anticipation of some most characteris-

tic features of Gothic architecture. Opposite the throne was a finely wrought tank of gypsum slabs—a feature borrowed perhaps from an Egyptian palace—approached by a descending flight of steps, and originally surmounted by cyprus-wood columns supporting a kind of impluvium. . . .

The frescoes discovered on the palace site constitute a new epoch in the history of painting. Little, indeed, of the kind even of classical Greek antiquity has been hitherto known earlier at least than the pompeian series. The first find of this kind marks a red-letter day in the story of the excavation. . . .

The Written Language

But manifold as were the objects of interest found within the palace walls of Knossos, the crowning discovery—or, rather, series of discoveries—remains to be told. On the last day of March, not far below the surface of the ground, a little to the right of the southern portico, there turned up a clay tablet of elongated shape, bearing on it incised characters in a linear script, accompanied by numeral signs. My hopes now ran high of finding entire deposits of clay archives, and they were speedily realized. Not far from the scene of the first discovery there came to light a clay receptacle containing a hoard

of tablets. In other chambers occurred similar deposits, which had originally been stored in coffers of wood, clay, or gypsum. The tablets themselves are of various forms, some flat, elongated bars, from about 2 to 7½ inches in length, with wedge-like ends; others, larger and squarer, ranging in size to small octavo. In one particular magazine tablets of a different kind were found—perforated bars, crescent and scallop-like "labels," with writing in the same hieroglyphic style as that on the seals found in eastern Crete. But the great mass, amounting to over a thousand inscriptions, belonged to another and more advanced system with linear characters. It was, in short, a highly developed form of script, with regular divisions between the words, and for elegance hardly surpassed by any later form of writing.

A clue to the meaning of these clay records is in many cases supplied by the addition of pictorial illustrations representing the objects concerned. Thus we find human figures, perhaps slaves; chariots and horses; arms or implements and armor, such as axes and cuirasses; houses or barns; ears of barley or other cereals; swine; various kinds of trees, and a long-stamened flower, evidently the saffron crocus, used for dyes. On some tablets appear ingots, probably of bronze, followed by a balance, and figures which probably indicate their value in Mycenaean gold talents. The numerals attached to many of these objects show that we have to do with accounts referring to the royal stores and arsenals. (Turn to page 126)

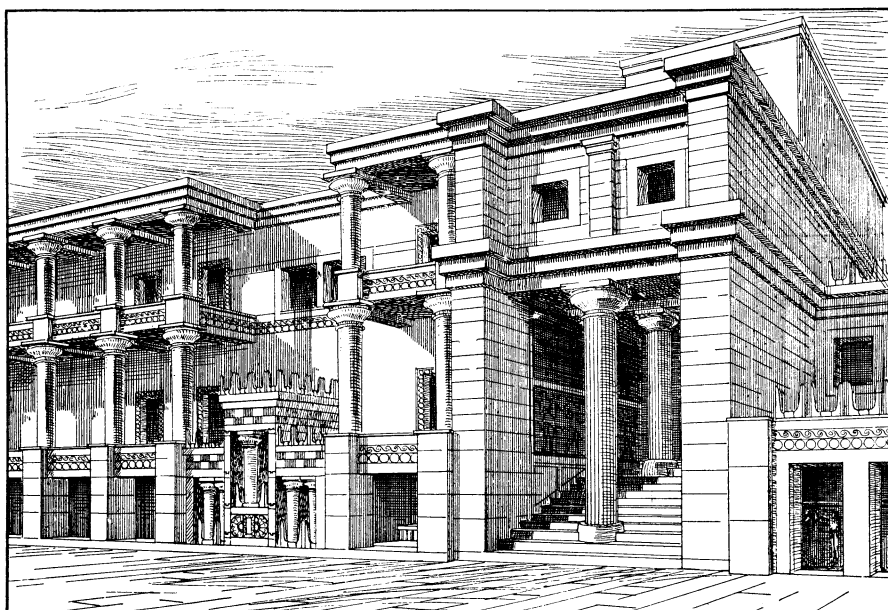


FIG. 332. RESTORED VIEW OF SECTION OF WEST PALACE WING FACING CENTRAL COURT, SHOWING COLUMNNADE SHRINE AND STEPPED PORCH. BY F. G. NEWTON.

How Much Rain Will Break Drought?

Meteorology—Public Health

Dry Weather May Cause More Milk Sickness

EVEN NORMAL rainfall now would not relieve the drought greatly, because it would not make up for the deficiency of past months, C. L. Mitchell, principal meteorologist at the U. S. Weather Bureau told Science Service.

"One question that comes up now," he said, "is how much rain would be needed to really break the drought. Even if a half inch fell over a wide area, I would hesitate to say that it was broken, for a week later there would be no effect of it left. Normally at this time about a half inch falls in a week, so that would merely prevent conditions from getting worse. Far heavier rains are needed, in order to make up for the weeks in which this half inch has not fallen.

"In Arizona and Utah, where there have been cloudbursts recently it is a result of the warm air from the south meeting colder air from the northwest, but these are all beyond the Rockies. They will help the cattle in that region, but they will not help

the corn and wheat growing areas farther east.

"The heat wave is entirely gone, and it is cool now over a large area, as a result of the high pressure area. But there is still no real disturbance, or low, to work in conjunction with this and bring real rains."

Poison From Snake Root

Milk sickness, a disease contracted by drinking infected milk, or dairy products made from such milk, is likely to increase in many parts of the country as a result of the drought, Dr. James F. Couch, of the Bureau of Animal Industry, told Science Service.

The poisonous milk comes from cows that have eaten the white snake root, he said. This plant occurs mainly in Ohio, Illinois, Indiana, Kentucky, parts of Tennessee and eastern Missouri. As the drought cuts the supply of the usual feed of the stock, the animals will eat more of other plants

than normally, and so are likely to consume large quantities of the white snake root. Hence the danger, and the need for caution on the part of dairymen.

The danger is particularly acute in rural regions in these states, Dr. Couch declared, but in the cities the strict inspection of dairy products will probably cause less risk.

Symptoms of the disease in human beings include nausea, pain in the epigastrium (commonly known as "belly-ache"), weakness and headache. Cattle that have the disease are weak, and show fits of trembling. They take no exercise. Unfortunately, however, the cows may not show these symptoms until after they have given the poisonous milk. Dr. Couch stated that he knew of a case in which a whole family was taken sick and one member died before the cow that gave the milk showed any signs at all. Therefore dairy farmers should be very careful of what their cattle eat.

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The Labyrinth of Minos—Continued

Some tablets relate to ceramic vessels of various forms, many of them containing marks indicative of their contents. Others, still more interesting, show vases of metallic forms, and obviously relate to the royal treasures. It is a highly significant fact that the most characteristic of these, such as a beaker like the famous gold cups found in the Vapheio tomb near Sparta, a high-spouted ewer and an object, perhaps representing a certain weight of metal, in the form of an ox's head, recur—together with the ingots with incurving sides among the gold offerings in the hands of the tributary Ægean princes—on Egyptian monuments of Thothmes III's time. These tributary chieftains, described as Kefts and people of the sea, who have been already recognized as the representatives of the Mycenaean culture, recall in their dress and other particulars the Cretan youths, such as the cupbearer above described, who take part in the processional scenes on the palace frescoes. The appearance in the records of the royal treasury at Knossos of vessels of the

same form as those offered by them to Pharaoh is itself a valuable indication that some of these clay archives approximately go back to the same period—in other words, to the beginning of the fifteenth century B. C. . . .

The Sacred Writing

The signs already mentioned as engraved on the great gypsum blocks of the palace must be regarded as distinct from the script proper. These blocks go back to the earliest period of the building, and the symbols on them, which are of very limited selection, but of constant recurrence, seem to have had a religious significance. The most constantly recurring of these, indeed, is the labrys or double ax already referred to—the special symbol of the Cretan Zeus, votive deposits of which in bronze have been found in the cave sanctuaries of the god on Mount Ida and Mount Dicta. The double ax is engraved on the principal blocks, such as the corner stones and door jambs throughout the

building, and recurs as a sign of dedication on every side of every block of a sacred pillar that forms the center of what seems to have been the inmost shrine of an aniconic cult connected with this indigenous divinity.

The "house of Minos" thus turns out to be also the house of the double ax—the labrys and its lord—in other words, it is the true Labyrinthos. The divine inspirer of Minos was not less the lord of the bull, and it is certainly no accidental coincidence that huge figures of bulls in painting and plaster occupied conspicuous positions within it. Nay, more, on a small steatite relief, a couchant bull is seen above the doorway of a building probably intended to represent the palace, and this would connect it in the most direct way with the sacred animal of the Cretan Zeus.

There can be little remaining doubt that this vast edifice, which in a broad historic sense we are justified in calling the "palace of Minos," is one and the same as the traditional "labyrinth."

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