

Clues to the Location of Minoan Bull-Jumping from the Palace at Knossos*

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Although there is an abundance of archaeological evidence of Minoan palace culture, there is still much to be learned about the palatial period of the Aegean Bronze Age. One area of uncertainty, which has led to varying degrees of speculation and a great deal of controversy, is the bull-jump. While there are several aspects of this Cretan activity that have caused much debate, one area that has puzzled scholars is the exact location of this event.¹ Not surprisingly, several authorities maintain that bull-jumping was held outside the confines of the major palaces, while others argue that the central courts of the palaces were the sites of these contests.² A recent examination of the palace at Knossos and its surroundings has provided additional clues which may shed further light on the location of these spectacular activities.

The opponents of the central court theory believed that it was not realistic to direct a bull through the interior of a palace without causing damage en route to the central court. Also, once in the central court, there was the problem of keeping a bull confined to the area, as the spaces between columns opened directly into adjacent areas of the palace. The advocates of the central court theory make the following arguments: the central court provided adequate spectator accommodations, including a safe area for viewing; there was a system in place designed to keep a bull confined to the central court; there was access to the central court without leading the animal through the interior of the palace; there was a suitable area for detaining a bull; and, most recently, the identification of what has been interpreted as vaulting devices located in the

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1. For a detailed discussion on the subject see James G. Thompson, "The Location of Minoan Bull-Sports: A Consideration of the Problem," *Journal of Sport History* 13 (Spring 1986): 5-13. Thompson cites several authorities and their views on the location of the bull-jumping activities of the Minoans. He argued that, until additional information extends our knowledge about Minoan bull-vaulting, no firm conclusion can be drawn regarding the exact location of these activities.

2. I. W. Graham, *The Palaces of Crete* (Princeton, 1962) and Gerald Cadogan, *Places of Minoan Crete* (London and New York, 1976) classify Minoan palaces into major and minor sites. Both of these Minoan experts list the major palaces as Knossos, Phaestos, and Mallia. Regarding the location of the bull-jumping exhibitions, Graham supports the central court theory while Cadogan does not have an opinion on the subject.

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central courts which were used by vaulters to assist them in their jumps.³ The three major palace sites-Knossos, Phaestos, and Mallia-have all or some of these attributes.

Prior to the on-site investigation at Knossos, Mallia was the sole location that was recognized as possessing all the criteria mentioned by the supporters of the central court theory.⁴ Phaestos, however, has four of the five standards: a possible vaulting device, ample spectator facilities with a safe area for viewing, access to the central court from the exterior of the palace, and pens for housing bulls prior to the contests.⁵ Regarding Knossos, it now is possible to link additional measures to those previously identified at the site.⁶ An important consideration in the central court argument is having access to the central court without leading the bull through the interior of the palace. The ability to detain temporarily the animal(s) in a pen or large compartment while waiting to take part in the activity is also essential. Thus an area or stall arrangement with access to the exterior of the palace (conveniently located near the central court) would be a necessity. Such a system would allow the bull to be brought into the "bull pen" area from outside the palace, thus avoiding a journey through the delicately decorated interior rooms of the palace. An examination of the immediate area surrounding the Knossos central court did not reveal rooms or storage areas suitable for housing a bull or any type of animal, but on a level below the central court and on the eastern side of the palace there exists a compartment area that may have been used for the express purpose of keeping animals (fig. 1). According to Shaw, these compartments are located in what was the service area of the palace; therefore, he suggested that this sector served as a temporary storage area for keeping small animals that were to eventually be killed and eaten. There were 11 compartments that had sliding panels which allowed the animals to enter and exit. The northernmost compartments were much larger than the others, and Shaw believed that large animals such as horses were kept in these pens.⁷ If, as Shaw suggested, horses were detained here, then perhaps bulls could have been kept here as well. From these compartments a bull could have been led through the propylon (entrance) into

3. Thompson, "The Location of Minoan Bull-Sports," 6-12. Also see J. W. Graham, "The Central Court as the Minoan Bull-Ring," *American Journal of Archaeology* 61 (1957): 255-260; A. Ward, "The Cretan Bull-Sports," *Antiquity* 42 (1968): 118; and James G. Thompson, "The Bull-Jumping Exhibitions at Mallia," *Archaeological News* 14 (1985): 1-8.

4. Thompson, "The Bull-Jumping," 1-8.

5. Graham suggests that, while there is no evidence at Phaestos that a restraining fence surrounded the central court (which would have prevented a bull from straying into other areas of the palace), it should not be entirely discounted that such an arrangement once existed. Because of the clear evidence of this type of arrangement at Mallia, it is possible that a similar restraining fence existed at Phaestos. For more information on the subject see Graham, "The Central Court," 259.

6. A restraining fence to confine a bull to the central court and adequate seating arrangements have been previously identified at Knossos. For more detailed treatment of these subjects see Graham, "The Central Court," 259 and J. W. Graham, "Windows, Recesses and the Piano Nobile," *American Journal of Archaeology* 64 (1960): 333. For additional discussion on the archaeological investigations at Knossos see Arthur Evans, *Palace of Minos at Knossos* (1921; rep. New York, 1960), I-IV.

7. J. W. Shaw, "Sliding Panels at Knossos," *The Annual of the British School at Athens* 73 (1978): 243. There was a Roman parallel to animal pens located near a sports arena. According to J.P.V.D. Balsdon, *Life and Leisure in Ancient Rome* (New York, 1969): 306, the Colosseum has a substructure with rooms designed to hold animals for the popular wild beast fights which were an important feature of gladiatorial contests.

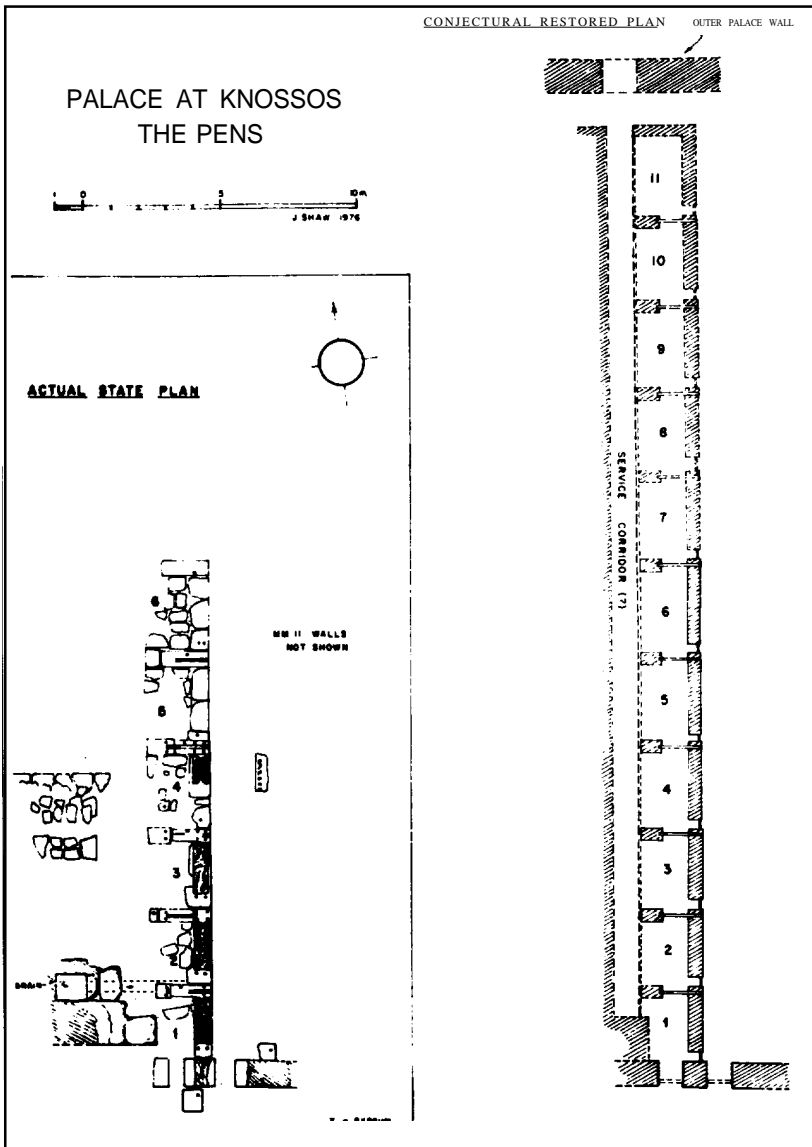


Fig. 1: Compartment area plan (left) and conjectural restored compartment area plan [J. W. Shaw, "Sliding Panels at Knossos," *Annual of the British School at Athens* 73 (1978), fig. 2]. Courtesy of the British School at Athens.

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Fig. 6. Plan of the Palace of Knossos.

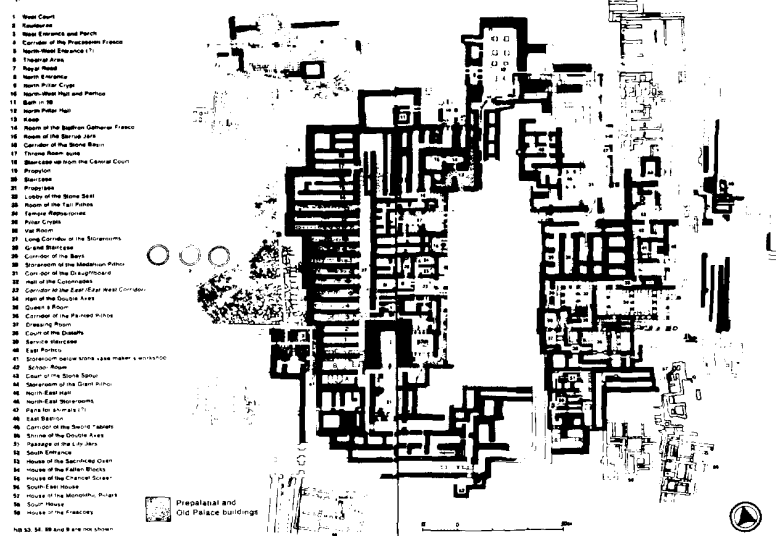


Fig.2: Plan of the palace at knossos [Gerald Cadogan, *Palace of Minoan Crete* (London and New York, 1976, fig. 6). Courtesy of Gerald Cadogan and Mrs. Pat Clarke. Route to Central Court = - - - - .

the pillar hall (fig. 2) of the palace. From this location there was easy access to a ramp which sloped upwards onto the central court (fig. 3). The ramp was quite narrow and, according to Shaer, was probably constructed that way for the specific purpose of having better control over who entered the central court.⁸ While Shaer does not mention that the ramp was used to lead or direct bulls into the central court, the location of the pens and the easy access from these pens to the ramp leading to the central court would make it possible to guide a bull or smaller animals for sacrifice to the central court without traveling through the interior of the palace.⁹ Moreover, it may be more than coincidence that, on the level overlooking the ramp entrance to the central court, there is a partial fresco of a bull (fig. 4).

While Knossos clearly possesses four of the five criteria deemed necessary by the proponents of the central court theory, the fifth criterion, evidence of a vaulting device, is not as conclusive.¹⁰ In fact, the state of preservation of the central court is so poor that it is difficult to determine what objects were once present. Ward suggests that, despite the poor conditions at Knossos, it should not be ruled out that an altar of some type was a part of the central court.¹¹ The

8. Benjamin Shaer, "The Entrances and Corridors of the Palace at Knossos," *Darmouth Classical Journal* 14 (1982): 29.

9. This hypothesis was discussed with Alexander MacGillivray, Assistant Director of The British School at Athens. MacGillivray agreed that the location of the animal pens in close proximity to the ramp would have been a natural route to follow in getting a bull to the central court and concluded that these conditions suggest that bull-jumping indeed may have taken place in the central court at Knossos.

10. The vaulting device theory can be considered a criterion only if the arguments offered by Graham (see note 13 below) and Thompson (see note 3 above) are correct.

11. A. Ward, "The Cretan Bull Sports," *Antiquity* 42 (1968): 117.



Fig. 3: Narrow ramp leading from pillar hall to the central court (photo by author).

English architects, Helen and Richard Leacroft, in their reconstruction of the central court, apparently agree with Ward.¹² While their restoration should not

12. Helen and Richard Leacroft, *The Buildings of Ancient Greece* (Leicester, 1966), 4.

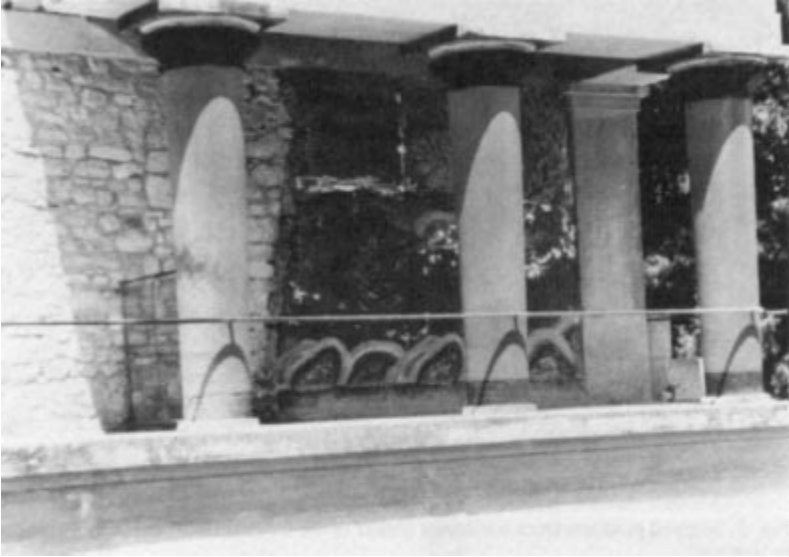


Fig. 4: Partial fresco of bull located above ramp entrance to the central court (photo by author).

be treated as ancient evidence, their central court scene not only shows bull-jumping taking place, but includes an object situated in the northwest sector similar in shape to the stepped platform found at Phaestos¹³ (figs. 5 and 6). Leacroft and Leacroft do not identify what the object was supposed to represent. Was it meant to be an altar, a vaulting device, or was it used for another purpose altogether? Because the restoration does not depict bull-jumpers using the “altar,” it should not necessarily negate its use in a sporting context. Ward

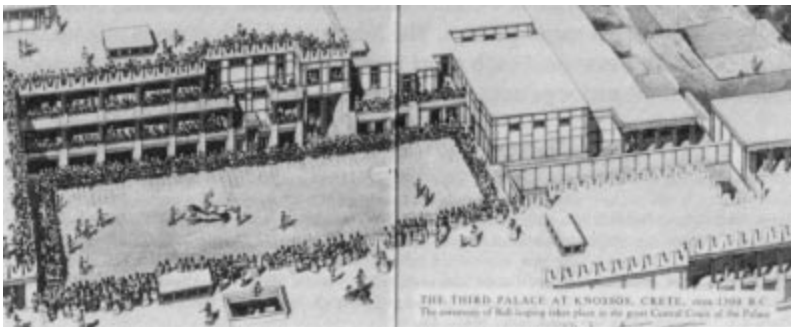


Fig. 5: Restored view of central court at Knossos with object located in the northwest corner [Helen and Richard Leacroft, *The Buildings of Ancient Greece* (Leicester and New York, 1966), fig. 131. Courtesy of Mrs. Helen Leacroft.

13. Graham. “The Central Court.” 260. Graham has argued that the stepped platform was used by acrobats to assist them in vaulting onto the back of a bull.



Fig. 6. Stepped platform from northwest corner of the Central Court at Phaestos (photo by author).

and Graham are of the opinion that a religious altar could not only have served its ceremonial function, but may also have been used as a jumping off platform or place of refuge for bull-jumpers.¹⁴ Although the evidence is not conclusive for a vaulting device at Knossos, it should not detract from the central court theory as the locus for the bull-jumping performances. In fact, it may have been characteristic of Knossian vaulters not to use any device to aid their performances. Present-day gymnasts from one geographical location often use a particular technique or type of equipment while a gymnast from another locale uses a different approach.

In addition to the criteria mentioned, there are other similarities among the central courts of the major palaces. The long axis of each court is oriented in a north/south direction, and each court is paved with flagstones.¹⁵ Furthermore, each of the three major palaces contained some sort of religious shrine room at

14. A. Ward, "The Cretan Bull Sports," 119. Also see J. W. Graham, "Egyptian Features at Phaestos," *American Journal of Archaeology* 74 (1970): 232. Both Ward and Graham argue that large altars located in the central courts would not have rendered these areas unsuitable for bull-jumping. They maintain that the remains of those altars suggest that they were very sturdy and not likely to have been damaged by a bull. Furthermore, John G. Younger, "Bronze Age Representations of Aegean Bull-Leaping," *American Journal of Archaeology* 80 (1976): 135, argues that bull-leapers may have approached bulls from above, which implies a take-off platform of some type. Pelon, on the other hand, argues that the altar in the central court at Mallia would have been a drawback to the bull-jumping contests. For further discussion on this point see O. Pelon, "Le Palais de Malia et les Jeux de Taureaux," *Rayonnement Grec* (Brussels, 1982): 56.

15. J. W. Graham, *The Palaces of Crete* (Princeton, 1962), 74. It is tempting to speculate that the north/south direction of the central courts was for the same reason present day tennis courts are oriented north/south; that is, to minimize the direct reflection of the sun in the eyes of participants. Of course, this notion would only apply in the context of the vaulting devices which are located in the northwest sectors of the central courts. Regarding flagstone surfaces, J. Thompson, "The Location of Minoan Bull-Sports," 13, believes that flagstone surfaces were easily covered with sand or dirt which would have provided both bull and vaulter with firmer footing. Also see J. W. Graham, "The Central Court," 261, who stated that central court surfaces were covered with sand during bull games in the same manner Roman arenas were covered during gladiatorial combats.

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the north end of the west facade of the court. The suggested purpose of these rooms is for pre-bull game rites or bull sacrifices.¹⁶ Then there is the matter of the dimensions of these specific areas. Although the three palaces vary in their size and shape, they possess one constant element; that is, the central courts are almost identical in their dimensions. Knossos' central court measures 52x24m; Phaestos, approximately 51x23m; and Mallia, about 48x22m. In the cases of Phaestos and Mallia, the central court dimensions are disproportionately large for the architectural requirements of these palaces. Therefore, it is difficult to avoid suspicion that these dimensions were adopted to meet some special need." These characteristics, along with the previously mentioned criteria, suggest a kind of standardization of a sports arena.¹⁸ Graham also suggests that other activities such as boxing, a popular Cretan sport, and dancing, took place in the central court.¹⁹

Disagreement is rife among scholars concerning many aspects of the Minoan bull-jumping activities.²⁰ But the corresponding points of each of the major palace sites seems to point to the possibility that the central courts were utilized for specific purposes that may have included bull-jumping.

16. *Ibid.*, 80.

17. J. W. Graham, "The Central Court as The Minoan Bull-Ring," 255, and A. Ward, "The Cretan Bull-sport," 120.

18. *Ibid.* Graham makes a similar suggestion; however, he specifically mentions a football field and tennis court rather than the more general comparison to a sports arena.

19. Graham, *The Palaces*, 74. The central court itself had several functions apart from being the possible site of the bull games. It was a means of communication between different quarters of the palace, a source of light and ventilation for the interior chambers, and a convenient parade ground for festivals, processions, military reviews, and religious rites. For a discussion on the subject see Graham, "The Central Court," 256.

20. Younger, "Bronze Age Representations," 126-135, presents three main systems with several variations in each system for depicting bull-jumping in the Aegean Bronze Age. Also see John Younger, "A New Look at Aegean Bull-Leaping," *Muse* 17 (1983): 72-80.