

Almost Heaven, West Arkadia: Reconsidering the Ritual Use of Mountains in Late Bronze Age Greece

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The tendency in Bronze Age Aegean scholarship has been to view the mountaintop ritual sites of the Greek mainland in the Mycenaean period through the lens of the Minoan peak sanctuary. More recently, efforts have been made to consider these sites according to the highly categorized type of the peak sanctuary, or very broadly. Yet, these sites do not fit into the borrowed Minoan classification and feature commonalities that limit the usefulness of broad definitions. While a clear picture of the use of these mountains is difficult, it is clear that they exist apart from the ritual connotations of neighboring mountains despite proximity. This paper begins with a discussion of terminology in order to clarify this ongoing debate. Then, to better understand the ritual use of these sacred peaks, all nine sites that have been reasonably dated to the Mycenaean period are discussed. After briefly covering the data from these mountains, Mount Lykaion is presented as a case study for the use of a variety of methodological techniques aimed at answering questions of usage and ideology. This study presents the mountain in its local, regional, and broader contexts, using topographical and geographic data, viewshed analysis, and phenomenology.

Introduction

The study of mountains as sacred sites in Mycenaean Greece is one fraught with problems of terminology, typology, and documentation.¹ Treatments of sanctuary sites on the mainland are too often filtered through the lens of the Minoan “peak sanctuary”² - a type of sacred space imbued with a rigid and heavily developed set of identifying criteria.³ Examining these mainland peak sites using those strict criteria inevitably leads to typological issues. While the perception of mountains as sacred landscapes is common throughout the world, the ideology and usage associated with them differ from culture to culture. The various groups present in the area of modern Greece during the Bronze Age certainly communicated and associated with each other, but this does not necessitate a similarity or borrowing of religious thought as it pertains to mountains. More recently, there has been a scholarly effort to categorize Mycenaean mountaintop sites as “open-air shrines” or “pilgrimage centers”, but these terms also come with their own sets of criteria.⁴ While these more generalized typologies allow for greater flexibility within specific designations, they fail to access questions of meaning in unique contexts and strip these sites of their comparative value by using vague standards.

Further complicating issues of identification is the common problem in Aegean archaeology of collecting without publishing. Excavations from the twentieth century and earlier yielded materials and remains, but have never been published, and some are now lost. Of the 88 identified mountaintop sites on mainland Greece, nine date to the Bronze Age, yet only one has been extensively published.⁵ This stands in stark contrast to the 52 Bronze Age peak sanctuaries on Crete which have been the subject of scholarly debate in a number of publications for decades.⁶ Of course, the problem for the mainland is not merely one of publication, but also excavation. Many of those 88 sites are based on small-scale

surveys and surface finds.

While issues of excavation and documentation cannot hope to be addressed in this paper, it is possible to further illuminate and add dimension to the data that is available. In pursuit of this, this paper briefly presents all the available information for the nine sites that have been identified thus far. As the majority of these are either unpublished or included as the results of surveys or emergency excavations, the site of Mount Lykaion is used as a case study as it has been intentionally excavated for over a decade. This paper offers a methodological approach to applying recent techniques, particularly phenomenology and geospatial approaches, to older data by taking these methods and applying them to a single site.

Terminology

Reasons for the belief in mountains as sacred locations have been condensed into seven symbolic attributes: looking upwards, moving upwards, highness, transcendence, the proximity of peaks to the “heavens”, the difficulty of reaching the top, and even the impossibility of reaching the top.⁷ This applies to the landscape an association with the sky as the space that is above the mountain, and inherently brings up issues of accessibility, something that factors into the typologies discussed below. Of note here is the distinction between what is typically called a “sacred mountain” and what seems to be happening in the Greek world. Sacred mountains are isolated places that are often not meant to be reached, hence the difficulty or impossibility of accessing the top for the average person and the presence of an element of transcendence or even transgression.⁸ However, the mountain sites in Greece, those used by the Minoan cultures on Crete, the Mycenaean on the mainland, and even further into the later periods of Greek history, *are* accessible places where ritual happens, and not unreachable homes of the gods, with the notable exception, perhaps, of Olympos.

The categorization of the Minoan “peak sanctuary” was first established in the early twentieth century when Sir John Myres and Sir Arthur Evans began excavations at Petsophas and Mount Jouktas respectively on the island of Crete.⁹ Subsequent excavations and survey projects have identified some 40-60 possible peak sanctuaries on Crete, depending on whose criteria are followed. For Bogdan Rutkowski, the peak sanctuary is defined by its position:

“on the mountain- or hill-top, but not necessarily on its highest summit. Natural terraces, rocks, crevices or an entrance to a cleft or cave are normal features. The area was covered by low plants, but trees are rare. Constructions survive in a few cases, they are walls of buildings, terraces and walls surrounding the sacred area, and altars. The sacred mountain is always situated at a distance from the settlement or town[.] Only the presence of votive offerings in addition to the layout of the site, are a safe criterion for defining a given site as a peak sanctuary”.¹⁰

Juxtaposing Rutkowski’s focus on the topographical features of a potential site is Alan Peatfield, whose attention is more on the material remains. Peatfield agrees with Rutkowski on the significance of the summit location and the considerations of human-site relationships, but stresses the importance of votive offerings.¹¹

These approaches, with a few others, were recently combined by Alexis Belis in her 2015 survey of Greek mountaintops. Beginning topographically, Belis notes that peak sites needed to be on those summits with the best visibility.¹² Belis, here, includes both the view from the peak to nearby settlements, to other mountain tops, as well as the best view of the peak itself from its associated settlement. The peak must also be accessible from its settlement. The journey from a settlement to a peak sanctuary was rarely over an hour.¹³ Assemblages found

at peak sites vary, but typically include the categories emphasized by Peatfield of animal figurines, human figurines, and human limb models.¹⁴ Limited architectural features, pebble scatters and signs of intense burning should also be considered.¹⁵ Many of these features are not found at mainland sites.¹⁶

Peak sites on the mainland have alternatively been referred to as “pilgrimage centers”. Konstantinos Kalogeropoulos broadly defines a pilgrimage center as “a sacred place that attracts worshippers from a wide area, a whole region, or even a larger multi-ethnic area”.¹⁷ He also notes three criteria, a marked step down from the many stipulations of “peak sanctuary”. First, the site must be geographically distant from the worshipper’s settlement and, as such, be able to accommodate worshippers nearby for a short time. Second, archaeological remains must denote ritual activity in some way. Finally, a site must be compared to other pilgrimage sites from the same time period and region.¹⁸ These criteria are rather broad and entirely dependent on the previous identification of a similar pilgrimage site.

The better terminology, perhaps, is simply the “open-air” sanctuary or shrine.¹⁹ This raises the problem of broadness again, however, as these open-air sites are not restricted to mountains or hills. Furthermore, there has been a recent push to differentiate sites on high mountains from those on low hilltops.²⁰ While there does seem to be some distinction between the characteristics of these sites, the small sample size of both makes this difference blurry at best.²¹ Yet Natalie Sussman rightly notes that what we distinguish as “mountain” and “hill” are not necessarily reflected in the ancient Greek mindset.²² This is complicated further still in the Mycenaean period, a time devoid of written data beyond the Linear B records. To avoid these various terms and their difficulties, hereafter “open-air sanctuary” or “mountaintop sanctuary” are used to refer to the nine sites discussed. While broad, this classification circumvents issues

of comparison that arise when using already established terminology.

The Mountaintop Sanctuaries of Late Helladic Mainland Greece

As briefly mentioned above, of over eighty identified sites on mountain peaks on the mainland, only nine have yielded material dating to the Bronze Age.²³ In alphabetical order, these are Mount Arachnaion in the Argolid,²⁴ Mount Hymettos in Attika,²⁵ Mount Kronion in Elis,²⁶ Mount Kynortion in the Megarid,²⁷ Mount Loutraki in the Argolid,²⁸ Mount Lykaion in Arkadia,²⁹ Mount Mavrovouni in Boiotia,³⁰ Mount Oros on Aegina,³¹ and Profitis Elias in Arkadia.³² Of these nine, only Kynortion and Lykaion have seen extensive excavations, due to Mount Kynortion's association with the later sanctuaries of Apollo Maleatas and Asklepios at Epidaurus, and Mount Lykaion's connection with the later sanctuaries of Zeus and Pan and the games that took place there. The remaining seven

have been subject to a variety of rescue operations and surveys with differing levels of subsequent publishing. All have some degree of ritual activity, identifiable through the presence of figurines and drinkware. In addition, all have shared topographical features, but this is mostly restricted to their elevation above sea level and presence on a peak, whether it be a hill or mountain.

The archaeological remains at each site are presented in Table 1 with the data grouped by regions.

The only commonality to all sites is the presence of pottery, which varies from small quantities of sherds to intact vessels. The majority of the vessels found are drinkware, suggesting the occurrence of ritualized drinking, though cooking vessels have been noted at Mount Arachnaion.³³ Metal remains include bronze weapons and tools. Seal stones found at a few locations have been used to argue for elite or official cult practice.³⁴ Conuli, defined as terracotta spindle whorls, buttons, or decorations,

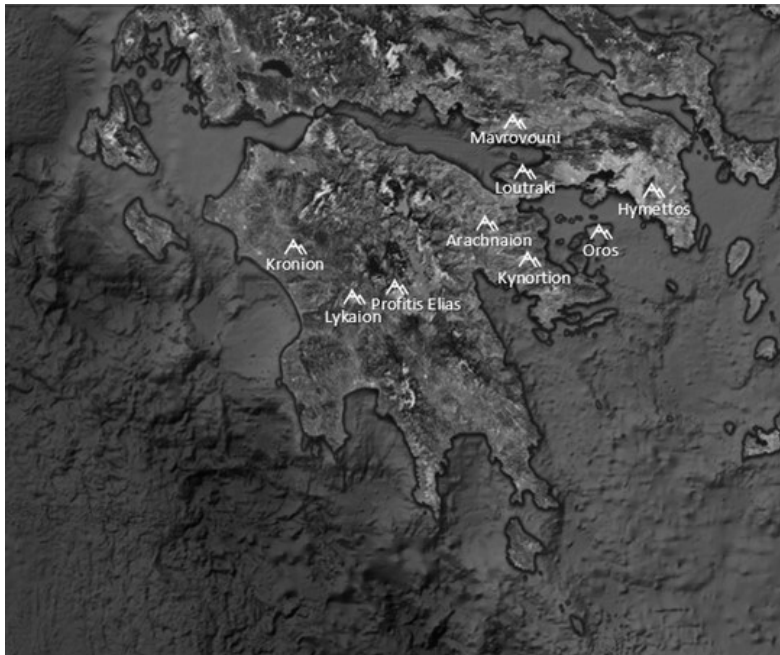


Figure 1: Map showing the locations of the nine mountaintop/open-air sanctuaries in use during the Mycenaean Bronze Age.

Site Name	Region	Elevation	Pottery	Metal	Seal Stones	Conuli	Figurines (Votives)	Animal Remains	Burning
Oros	Aegina	532 m	✓	✓			✓		
Arachnaion	Argolid	1,119 m	✓	✓	✓	✓	✓		✓
Kynortion	Argolid	300 m	✓	✓	✓		✓	✓	
Lykaion	Arkadia	1,382 m	✓		✓		✓	✓	✓
Profitis Elias	Arkadia	1,100 m	✓			✓			
Hymettos	Attika	1,026 m	✓						
Mavrovouni	Boiotia	648 m	✓						✓
Kronion	Elis	123 m	✓				✓		
Loutraki	Megarid	1,069 m	✓				✓		

Table 1: The data collection from the nine mountaintop/open-air sanctuaries that dates to the Bronze Age. Note the lack of pebble scatters and metal votives. Metal weaponry and terracotta votives were relatively common.

are common to Mycenaean sites in general though rare at these ritual locations.³⁵ Human figurines are exclusively made of terracotta at these sites, typically of the Phi and Psi types, and animal figurines are usually of bulls. There is little evidence for burning and animal remains, due either to the absence of these activities or the lack of large-scale excavation. Though there was evidence of burning at both Mount Arachnaion and Mount Mavrovouni, the former has published no comprehensive catalogue of the animal remains found and the latter has not been excavated.

The sites with the most extensive remains are, unsurprisingly, those that have been the subject of comprehensive excavations. Mount Arachnaion was investigated from 2008 to 2010 as part of an emergency excavation conducted prior to the building of a road and the installing of a large antenna on top of the mountain.³⁶ Mount Kynortion has been the subject of many excavations as it has exceptional material from later periods, but the Mycenaean remains have not been investigated since the 1980s.³⁷

Mount Lykaion is the only site with both extensive excavations and publications. The mountain has been the subject of survey and digging projects since 2004, though only reports from the 2004 to 2010 seasons have yet been published.³⁸ Due to the sizable body of published materials from the site, Mount Lykaion will serve as a case study for exploring the meaning and use of the objects found at the site.

Case Study—Mount Lykaion

As the most widely excavated mainland Bronze Age mountaintop site, Mount Lykaion is the best published of the open-air mountaintop sanctuaries. Studies of its acoustic environs, geophysical context, and presence in Linear B records have been conducted alongside long-term investigations of both the upper and lower sanctuaries.³⁹ The site experienced continual use from as early as the Final Neolithic to the Hellenistic period and, in addition to the Bronze Age ash altar, also features architecture associated with the later sanctuaries of Zeus and Pan as well as

facilities for the Lykaion games.

The Mycenaean material from the site is extensive. The ash altar at the site, originally excavated in the early twentieth century by Konstantinos Kourouniotis, is believed to be 30 m in diameter and about 1.5 m thick.⁴⁰ The soil is dark and ashy, full of burnt animal remains, stones, and votive objects. More recent scientific analyses have determined that this soil is actually highly fragmented burnt material consisting of animal remains.⁴¹ Preliminary results of other analyses confirmed the presence of burnt grains in the ash and wine in the vessels.⁴²

There are several hundred Mycenaean sherds that were excavated from the ash altar, in addition to both earlier and later material.⁴³ These finds include goblets, bowls, cups, kylikes, mugs, dippers, askoi, feeding bottles, and stirrup jars.⁴⁴ In addition to the numerous vessels, there have also been found several clay animal figurines, a clay human figurine, and a lentoid seal stone.⁴⁵ As noted by the excavators, these items, in conjunction with the large ash altar and a possible built platform, denote clear signs of ritual use in the Mycenaean period.

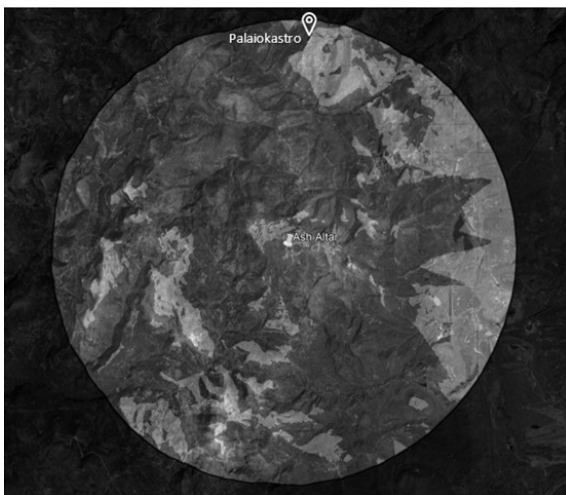


Figure 2: Google Earth-generated viewshed from the ash altar of Mount Lykaion with Palaiokastro.

In order to better understand the function of this mountaintop sanctuary in the Bronze Age, this paper presents first its topography and location in the physical landscape. After setting the site regionally and discussing its interconnectedness with other sites in the area, several methodologies are used to better explore its function in the ritual landscape. These are intervisibility, including viewshed and sightline analysis, astronomical considerations, and phenomenology.

Mount Lykaion occupies a border zone between Arkadia and Messenia, a natural boundary between these two lower-lying landscapes. It has been argued recently that the mountain itself fell within the political control of Pylos.⁴⁶ The peak is in proximity to many settlements sites within the Pylian purview as well as sites to the east; however, the only one of these sites that is visible from the peak is Palaiokastro which has evidence of a Mycenaean cemetery.⁴⁷ As a necropolis, this is not a settlement itself, but signifies the proximity of a settlement that was in use during the same period as the ash altar on Mount Lykaion.⁴⁸ Conducting a rudimentary viewshed analysis via Google Earth shows that the site lies within the view provided from the summit and its ash altar, but just barely. As the closest identified settlement to Mount Lykaion, it is thus entirely possible that the locals of this area could have had a high degree of inter-site visibility.⁴⁹

Of note geographically are clear sightlines west to the Ionian coast, and north to the plain of Elis and the island of Zakynthos, and to Mounts Erymanthos, Aroania, and Kyllene. In the east the sightlines extend to Mount Mainalon, and in the south to the Messenian Gulf as well as to Mounts Tetrazi, Taygetos, Ithome, and Parnon.⁵⁰ These locations are spread throughout the Peloponnese and suggest interconnectedness. Settlements have been noted near Mounts Taygetos,⁵¹ Ithome,⁵² Parnon,⁵³ and Erymanthos,⁵⁴ but these peaks have not been investigated for ritual activity.

Brent Davis' 2014 monograph on Minoan

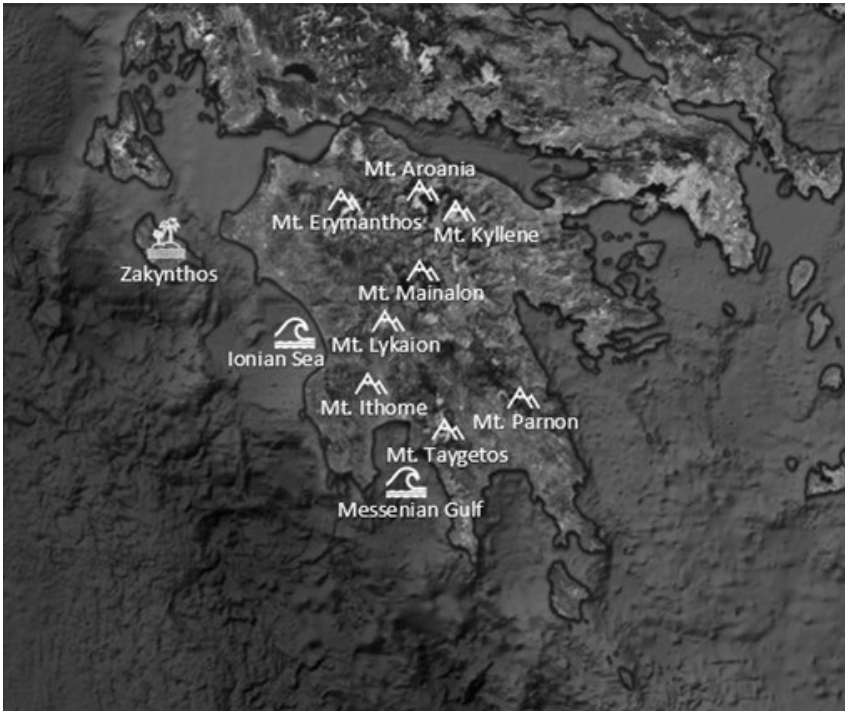


Figure 3: Geographical features with clear sightlines from Mount Lykaion. Further study is needed to determine how viewable Mount Lykaion is from these sites.



Figure 4: The September equinox sunrise from Mount Lykaion.



Figure 7: The June solstice sunrise from Mount Lykaion.



Figure 5: The September equinox sunset from Mount Lykaion.

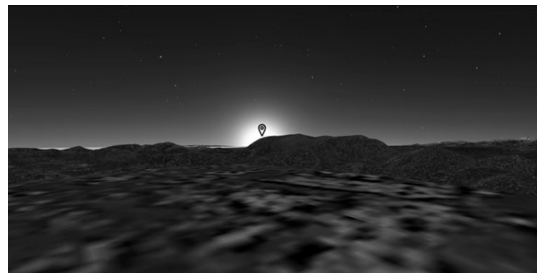


Figure 8: The June solstice sunset from Mount Lykaion.



Figure 6: Locations of the ash altar at Mount Lykaion, the peak seen in the September equinox sunset from Mount Lykaion, and the Mycenaean site of Bassae.

inscribed stone vessels offers further insight into the uses of peaks in the Minoan world that may be relevant for Mount Lykaion.⁵⁵ In an appendix, he notes that many of the Minoan peak sanctuaries are intervisible with each other but also afford sightlines of sunsets and rises during solstices and equinoxes.⁵⁶ Looking to the east on either equinox, the sun rises over the Parnon mountains.⁵⁷ Sunset sightlines on either equinox from Mount Lykaion afford a view of an unidentified low peak not far from the site of Bassae. On the solstices, there are more prominent peaks in the sightlines from the mountain, but further survey needs to be conducted to identify whether or not there are Mycenaean, or later, sites in the locations in view. Conducting this analysis via Google Earth also offers methodological issues of placement and location that might be further helped by surveying.⁵⁸ An added complication is that these views are modern ones. Additional study is needed to identify the Bronze Age paths of the equinox and solstice. Therefore, at this time, it is a stretch to say that ritual activity on Mount Lykaion benefitted from or utilized calendrical observations.

In addition to the need for a survey investigation to further explore the possible astronomical function of the site, phenomenological observations can help to illuminate the potential ritual use of Mount Lykaion. Sussman, in fact, has urged the use of a combination of phenomenology

and GIS studies in order to make up for shortcomings in either methodology.⁵⁹ The site experiences high winds and during sacrificial rituals would have smelled of smoke and cooking meat, and of the wines used in drinking ceremonies, and of the people who participated in both. Given the large size of the ash altar, it is also likely that a haze from the smoke would have been carried on the wind, visible from quite a distance. Anyone who has spent time around a fire knows that it can be tasted as well as smelled. The height of the mountain makes it quite a hike from the low-lying plains nearby, adding to the arduous but magnificent experience of reaching its peak. Ongoing acoustic studies will hopefully illuminate the soundscape of the sanctuary.⁶⁰ Experimental archaeology might also be a helpful avenue for the recreation of the experience of being at the altar during ritual use.

Conclusions

The mountains of mainland Greece occupy a geographic and sacred landscape that is not yet well understood. Their counterparts on Crete and in other places around the globe offer some useful lines of inquiry, but the application of such parallels can lead to problematic comparisons and issues of categorization. By presenting the finds from the Mycenaean open-air mountaintop sites on the Greek mainland, this paper identifies commonalities and illustrates the

potential ritualistic nature of these sites. The framework used to analyze Mount Lykaion here as a case study can be applied to the others. Overall, further excavation, research, and rigorous publishing is needed to more comprehensively understand the ritual use of these mountaintops. The only mountaintop sanctuary site on the mainland to have both extensive excavations and publications, Mount Lykaion, remains the best case study available to scholars for the study of mountaintop rituals in the Bronze Age Greek mainland. While further survey is needed to fully understand the possibility of intervisibility and interconnectedness between it and surrounding sites, this study has shown that, at the very least, mountains were not observatories for the local Mycenaeans but offered prominent, transcendent, and meaningful terrestrial spaces for the practice of religion in the Bronze Age.

Acknowledgements:

I would like to thank Thomas Palaima and Vassilis Petrakis for helpful feedback and guidance on an early draft of this paper. Immense gratitude also to my anonymous reviewers and editor, and, as always, to A.P.

Endnotes:

- 1 For the purposes of this paper, “Mycenaean” is here defined as a time period on mainland Greece from LHIA to LHIIIC in order to juxtapose this period and culture on the mainland with its earlier counterpart, “Minoan”, on Crete and its nearby islands.
- 2 In particular, cases for moving away from Minoan religious identifiers for mainland sites have been argued by Rutkowski 1986, Pilafidis-Williams 1998, and Marakas 2010.
- 3 Belis 2015, 9–11.
- 4 Kalogeropoulos 2019.
- 5 Belis 2015, 229.
- 6 Belis 2015, 9–11.
- 7 Naess 1995, 2.
- 8 Naess (1995, 2) notes that while in Chinese traditions it is a good thing to be able to reach the summit of a sacred mountain, in nearby Tibet and in Hindu traditions it is not.
- 9 Myres 1902–1903, 356–87; Evans 1921, 153–59.
- 10 Rutkowski 1988, 74.
- 11 Peatfield 1992, 60.
- 12 Belis 2015, 15.
- 13 Belis 2015, 17.
- 14 Belis (2015, 19–23) offers a more robust treatment of the variety of artifacts. Suffice it to say that in addition to these three types in a number of different styles, commonalities seem to be stone libation tables and different kinds of feasting and drink wares.
- 15 Belis 2015, 26–28.
- 16 Salavoura 2018, 78–9.
- 17 Kalogeropoulos 2019, 222.
- 18 Kalogeropoulos 2019, 222–223.
- 19 Whittaker 2018, 55.
- 20 Salavoura 2018, 78–79.
- 21 Mount Oros and Mount Kynortion are the two low peaks, with elevations of 532 m and 300 m respectively. Both have associated settlement sites where the rest do not. See further Salavoura 2018 and Lambrinudakis 1981.
- 22 Sussman 2020, 178.
- 23 Belis 2015, 249–252. This is, of course, not an exhaustive list and merely reflects what has been found through excavation and survey. It is highly likely that there are many more sites of this type waiting to be identified on the mainland.
- 24 Rupp 1976; Psychoyos and Karatzikos 2016; Kalogeropoulos 2019.
- 25 Langdon 1976; Ruppenstein 2011.
- 26 Belis 2015.
- 27 Lambrinudakis 1981; Lambrinudakis 2002; Kalogeropoulos 2019.
- 28 Langdon 1976; Belis 2015.
- 29 Romano and Voyatzis 2014.
- 30 Belis 2015.
- 31 Salavoura 2018.
- 32 Forsén et al. 1999.
- 33 Psychoyos and Karatzikos 2016, 313.
- 34 Lambrinudakis 1981, 62; Whittaker 2018, 57.
- 35 Iakovidis 1977.

36 Psychoyos and Karatzikos 2016.
 37 Lambrinudakis 1981. The site is the location of the sanctuary of Apollo Maleatas and is not far from the associated Askleion of Epidaurous.
 38 Romano and Voyatzis 2014; Romano and Voyatzis 2015.
 39 Jordan 2018; Mentzer et al. 2017; Davis 2008; Mahoney 2016a; Romano and Voyatzis 2014; Romano and Voyatzis 2015.
 40 Belis 2015, 190.
 41 Mentzer et al. 2017.
 42 Belis 2015, 187.
 43 This is the number of currently published pottery sherds. More recent unpublished presentations have the number in the thousands.
 44 Romano and Voyatzis 2014, 592–610.
 45 Romano and Voyatzis 2014, 616–617. The animal figurines are bovine and a bull in profile features on the seal stone.
 46 Eder 2011.
 47 Mahoney 2016a, 11. Interconnectivity has been explored in later periods via roads and trails by Pihokker et al., but not in the Bronze Age.
 48 Demakopoulou and Crowel 1998.
 49 Mahoney (2016a, 11–13) lists many other settlements surveyed in the region, but they fall outside of this viewed bubble. Likely the mountain would have been visible from many of them but at a distance to make the details fuzzy.
 50 Romano and Voyatzis 2014, 570; Mahoney 2016b, 89.
 51 Hope Simpson 2009.
 52 Bennet 1998.
 53 Dawkins 1910.
 54 Townsend Vermeule 1960.
 55 Davis 2014, 401–419.
 56 Davis 2014, 402–404.
 57 Images were generated using Google Earth. The equinox images are of the September solstice, but did not appear drastically different in March. For the solstice, the June dates were used.
 58 For example, studies should be conducted on obscuration and sightline based on where one stands at the site.
 59 Sussman 2020.
 60 Jordan 2018.

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