The Annual of the British School at Athens, **118**, 2023, pp. 291–322 © The Author(s), 2023. Published by Cambridge University Press on behalf of The Council, British School at Athens doi:10.1017/S006824542200017X

# GOING TO SEE THE NYMPHS: LANDSCAPE AND RELIGIOUS EXPERIENCE AT THE ZAR TRYPA CAVE (MOUNT OSSA, THESSALY)

by Anna Magdalena Blomley @

University of Oxford

This paper focuses on the little-known but important cave-sanctuary of Zar Trypa on Mount Ossa (modern Kissavos) in north-eastern Thessaly. In 1910, research conducted at the site uncovered remains of votives from the Classical, Hellenistic and Roman periods, including a group of eight inscriptions dedicated to the Nymphs. Despite this remarkable epigraphic assemblage, the site was not investigated beyond a single excavation season and today is largely unknown. Consequently, the Zar Trypa cave and its finds have never featured prominently in the discussion of Thessalian religion or of Greek 'natural' sanctuaries. Combining archival studies, on-site observations and GIS-based methods of landscape archaeology, this paper sets out to re-assess the surviving archaeological evidence from the Zar Trypa cave, to examine the spatial setting of ritual activity at the site, and to place the cave in the context of Mount Ossa's natural environment and ancient settlement pattern. Drawing on the methodological framework of 'lived religion', this assessment not only contributes towards our understanding of ancient religious experiences at the Zar Trypa cave, but also addresses broader questions such as the significance and meaning of 'sacred travel' in pre-Christian antiquity.

### INTRODUCTION: STUDYING THESSALIAN RELIGION

In the third or second century BC, a certain Mikra, daughter of Damosthenes, dedicated a marble stele to the Nymphs (*McDevitt* 647). At first glance, this monument – now in the Archaeological Museum of Larisa – seems unremarkable. Flat-topped, with an inscribed dedication on a simple moulding along its upper edge, Mikra's dedication visually resembles countless other Hellenistic votive stelai (Fig. 1). In contrast to its conventional appearance, however, the stele's find context is both striking and unusual. The monument was discovered in 1910 together with fragments of at least six other inscribed stelai and an inscribed base at Zar Trypa, a remote cave high on Mount Ossa in north-eastern Thessaly. This assemblage – exceptionally large for a Greek cave – clearly identifies Zar Trypa as an important religious space sacred to the Nymphs.<sup>2</sup>

The Nymphs are no strangers to ancient Thessaly. Through mythological narratives and genealogies, they are firmly linked to specific places in the region's real and imagined geography (Larson 2001, 163–8), while their appearance on Classical and Hellenistic civic coinages gives them a unique place in Thessaly's divine iconography (Moustaka 1983, 47–52; Mili 2015, 42). Yet the surviving evidence for Thessalian cults of the Nymphs is both surprisingly limited and remarkably heterogenous. For example, inscribed monuments dedicated to the Nymphs are

The inscribed dedications from the Zar Trypa cave were first published by Wace and Thompson (1909, 244–7) and subsequently included in several regional catalogues and corpora (*McDevitt* 643–50; Heinz 1998, 315–17 nos 255–60, 429 no. A 110; Helly 2013, 103–5 nos 1–7; Mili 2015, no. 357). The inscriptions will be referred to in this article by their number in McDevitt 1970. Both the dedication of Mikra and the other inscriptions from the Zar Trypa cave will be discussed in detail below.

<sup>&</sup>lt;sup>2</sup> According to Sporn (2020, 174), most epigraphic assemblages from cave-sanctuaries on the Greek mainland or the islands include no more than one or two inscribed monuments.



Fig. 1. The dedication of Mikra, daughter of Damosthenes (© Hellenic Ministry of Culture and Sports / Ephorate of Antiquities of Larisa / Diachronic Museum of Larisa; photo by Peter Haarer).

comparatively rare,<sup>3</sup> but nevertheless bear witness to a considerable diversity of sacred spaces<sup>4</sup> and divine associations.<sup>5</sup>

This picture in many ways resembles the surviving evidence for Thessalian religion as a whole. Recent studies such as M. Mili's *Religion and Society in Ancient Thessaly* (2015) have highlighted the fragmentary and heterogenous nature of this material, and have demonstrated that many of its perceived overarching characteristics spring from later stereotypes rather than from genuine beliefs or religious practices. Moving beyond these challenges and focusing on the intersection between religion and society, Mili's work emphasises that some cults of the Thessalian region may have played an important role in creating a Panthessalian group identity (Mili 2015, 213–57), while others are markedly idiosyncratic and localised (Mili 2015, 161–212).

<sup>&</sup>lt;sup>3</sup> Beyond the material from the Zar Trypa cave, Thessalian inscribed monuments dedicated to the Nymphs are limited to a 5th-century BC and a 4th- or 3rd-century BC inscription from the cave-sanctuary at Mount Karaplas near Pharsalos (SEG 1.247–8; I. Vallée Enipeus 72–3; Wagman 2016, 57–93), two 3rd-century BC inscriptions from Atrax (I. Atrax 75 and 83) and a late 2nd-century BC inscribed base from Hypata (SEG 3.453; de la Coste-Messelière and Daux 1924, 365–6; Heinz 1998, 430; McDevitt 1970, 7 no. 6). In addition, a 4th-century BC votive relief from Skotoussa shows the god Pan with three female figures, interpreted by Heinz (1998, 314–15) as Nymphs.

<sup>&</sup>lt;sup>4</sup> For example, the 'natural' setting of the cave on Mount Ossa contrasts sharply with the human interventions in and around the cave-sanctuary at Mount Karaplas (Wagman 2016, 19–34). *I.Atrax* 83, which mentions the embellishment of a sanctuary, provides a further insight into a possible cult setting. For the location of this sanctuary and the possible attribution of several architectural members to its structures, see Tziafalias 1995, 73.

<sup>&</sup>lt;sup>5</sup> The 3rd-century BC inscription *I.Atrax* 75 is dedicated to the Nymphs and to Dionysos, while the abovementioned votive relief from Skotoussa probably shows three Nymphs approaching the god Pan (Heinz 1998, 314–15). A particularly wide range of divinities is associated with the Nymphs at the cave-sanctuary at Mount Karaplas (Pan, Hermes, Apollo, Herakles, 'the fellow deities', Chiron, Asklepios and Hygieia [*I.Vallée Enipeus* 73]).

<sup>&</sup>lt;sup>6</sup> Mili 2015, 12–51, 259–99. For Thessalian 'stereotypes' in ancient sources, see also Kravaritou and Stamatopoulou 2018, 125–8.

In view of this complex, heterogenous and multifaceted role of religious beliefs and practices within Thessalian society, the concept of 'lived religion' provides a particularly appropriate framework for the study of Thessalian cults. Rather than viewing religion from a systematic or dogmatic angle, this cultural-historical approach focuses 'on actual everyday experience, on practices, expressions, and interactions that could be related to "religion". Although the concept of 'lived religion' was originally developed for the description and analysis of contemporary phenomena, it has over the past decade gained increasing traction in the study of Classical antiquity and has provided a useful basis for scholarly engagement with archaeological materials relating to different religious practices in the Graeco-Roman world.

Yet not all practices, expressions and interactions that shaped an individual's religious experience leave equally 'visible' or 'readable' archaeological traces. One group of activities that forms an important part of many contemporary religious experiences but is notoriously difficult to investigate archaeologically consists of the movements involved in or necessary for the participation in specific religious practices. These movements can take place at various spatial 'scales', from activities within a particular sacred site to long-distance travel (often referred to by the controversial term 'pilgrimage'). Between these two spatial extremes lies the phenomenon of religiously motivated 'local travel', i.e. travel to and from a sacred site that involved a comparatively short journey of a day or two, often within the territory of a single city state. Though archaeologically difficult to capture, this 'mid-distance' travel may well account for the majority of visitors at sacred sites in the Greek world and thus forms an important part of 'everyday religious experience' in Classical antiquity.

The following article seeks to offer a case-study of how a closer focus on the religious experience of 'on-site' and 'mid-distance' movement can contribute to a better understanding of Greek sacred sites and their archaeological assemblages. The chosen case-study is the abovementioned Thessalian cave-sanctuary of Zar Trypa. Its remote location and natural topography present considerable logistical challenges to modern scholars, with the result that systematic research at the site has so far been limited. The current paper thus combines archival material and recent methods of landscape archaeology to investigate how a study of the Zar Trypa cave in its topographical context can inform our understanding of the site as a Classical and Hellenistic sacred space.

# THE CAVE OF THE NYMPHS: A SACRED SPACE AND ITS FINDS

The Zar Trypa cave is located at an altitude of c. 1120 metres above mean sea level (henceforth 'mamsl') on the inland-facing east side of Mount Ossa, c. 3 km north of the modern village of

<sup>&</sup>lt;sup>7</sup> Raja and Rüpke 2015, 4. For the concepts of 'lived religion' and 'lived ancient religion', see for example also McGuire 2008, 3–18; Raja and Rüpke 2015, 3–4; Albrecht et al. 2018, 568–71.

<sup>&</sup>lt;sup>8</sup> Connelly 2011; Scriven 2014; Collar and Kristensen 2020, 13; Collar 2020, 35. As an ephemeral phenomenon, religiously motivated movement leaves few or no clear archaeological traces (Friese and Kristensen 2017, 4; Kristensen 2019, 13). In addition, it often remains unclear (especially in the absence of textual sources) how ritual can be inferred reliably from a given archaeological space or artefact (Luginbühl 2015, 54; Elsner 2017).

<sup>&</sup>lt;sup>9</sup> For the use of the term 'pilgrimage' to describe phenomena of sacred travel in the Graeco-Roman world, see for example Dillon 1997, xviii–xix; Elsner and Rutherford 2005, 1–9; Rutherford 2013, 12–14; Collar and Kristensen 2020, 7–8; Friese and Kristensen 2017, 2–4; Bremmer 2017, 277–81. For a possible 'typology' of ancient pilgrimages, see Elsner and Rutherford 2005, 9–30; for a criticism of this 'typology', see Friese and Kristensen 2017, 3.

For the phenomenon of 'local pilgrimage', see Elsner and Rutherford 2005, 18.

This approach is in part inspired by studies such as Wescoat's (2017) phenomenological investigation of pilgrims' kinaesthetic experiences at the sanctuary of the Great Gods on Samothrace, adapting her line of enquiry to a 'natural' rather than an 'architectural' space. Phenomenological approaches are common in the analysis of Prehistoric sacred caves (see for example Bjerk 2012; Skeates 2016; Whitehouse 2016), but have so far only rarely been applied to the study of Greek cave-sanctuaries of the Classical or Hellenistic periods. Notable exceptions include the work of Laferrière (2019) and Papalexandrou (2020).

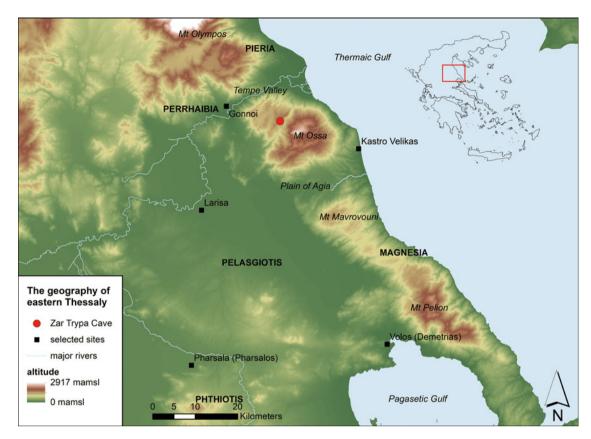


Fig. 2. The geography of eastern Thessaly: the location of the Zar Trypa cave.

Spilia (Fig. 2). Above an altitude of c. 800 mamsl, Mount Ossa divides into two distinctive peaks: the lower ridge of Psila Dendra in the west (1231 mamsl) and the main summit – known as Profitis Ilias – in the east (1978 mamsl).<sup>12</sup> The two peaks are divided by the upland valley of Megalo Pharagi (also known as Bougazi), which runs northwards from the village of Spilia. The Zar Trypa cave is located to the west of this valley, on the east slope of the Psila Dendra ridge (Fig. 3). The area immediately outside the cave's entrance provides a good view over the Megalo Pharagi valley and Mount Ossa's main summit, but due to the steepness of the slope between the cave and valley below it can only be accessed by following the Psila Dendra ridge (Fig. 4).

Within the ancient political landscape of north-eastern Thessaly, it is unclear with which *ethnos* and city state the area around the cave was associated. The closest Classical and Hellenistic settlements are Elateia (in the Pelasgiotis)<sup>13</sup> and Homolion (in the perioikic region of Magnesia)<sup>14</sup> – both located in the foothills of Mount Ossa – but it is unclear where the border

<sup>&</sup>lt;sup>12</sup> Wace and Thompson (1909, 243) refer to this peak as 'Plaka', but strictly speaking this toponym belongs to the lower northern part of the Psila Dendra ridge (as noted, for example, on the 1972 1:100,000 Greek Army Map [sheet "Αγιά"]).

<sup>&</sup>lt;sup>13</sup> For the sites at modern Elateia and Trochalo and their identification with ancient Elateia, see Arvanitopoulos 1911, 332–4; Stählin 1924, 88, 90; Helly 1973, 34; Gallis and Tziafalias 1974, 582–3; Tziafalias 2000, 99. Bouchon and Helly (2016) suggested an alternative identification of the remains at modern Elateia with ancient Gyrtone, but as Stamatopoulou and Katakouta (2020, 387–8) have argued, a location of this important settlement at Gremouras to the west of Larisa is more likely.

For the site of Omolio and its identification with ancient Homolion, see Arvanitopoulos 1910a, 188–90; 1911, 284–8; Theocharis and Lazaridis 1961, 175–8; Theocharis 1965; Vitos 2017. Helly (2004, 110; 2013, 180–1, 276) argued for a location of ancient Homolion at modern Kokkino Nero, but this hypothesis would be difficult to reconcile with the scarcity of Classical and Hellenistic archaeological material at this site.



Fig. 3. The Psila Dendra ridge from the south, with the location of the Zar Trypa cave.

between these cities or between the Pelasgiotis and Magnesia should be drawn.<sup>15</sup> Equally difficult to understand is the cave's location within local settlement and land-use patterns: the cave lies high above other Classical or Hellenistic sites on Mount Ossa (Fig. 5),<sup>16</sup> and there is as yet no evidence for ancient resource management strategies on the mountain's upper slopes. This is not to say that the high-altitude area around the Zar Trypa cave was devoid of human activities. If comparisons to nineteenth-century and modern land-use patterns are anything to go by, Mount Ossa's upper slopes could have been host to a variety of different economic activities, for example pastoralism, beekeeping, hunting, woodcutting and charcoal burning.<sup>17</sup> Many of these

Bouchon and Helly (2016, 132) suggested that the name 'Mikra, daughter of Damosthenes', which occurs both in an inscription from the Zar Trypa cave (*McDevitt* 647 [*LGPN* iiib.14504]) and in an inscription from Larisa (*IG* 9 (2).1227 [*LGPN* iiib.14503]), could indicate that the area of Psila Dendra was under the control of Larisa in the late 4th and the early 3rd centuries BC. However, there is no reason to assume that worship at the cave was limited to visitors from a particular political territory. On the reconstruction of *McDevitt* 647, the identification of the individuals mentioned in *McDevitt* 647 and *IG* 9(2).1227, and the provenance of *IG* 9(2).1227, see below.

Classical and Hellenistic remains on the slopes of Mount Ossa are concentrated in the area below 300 mamsl. This 'site horizon' is specific to the Classical and Hellenistic periods and is not replicated in earlier or later phases of human activity. For example, both a Mycenaean tholos tomb (Theocharis 1969a; 1969b) and a group of 4th- or 5th-century AD graves (Tziafalias 1981) have been recorded at an altitude of c. 800 mamsl near the modern village of Spilia. This suggests that the absence of Classical and Hellenistic sites above 300 mamsl reflects a genuine settlement pattern, rather than a coincidence of survival and recovery or a focus of archaeological research on Mount Ossa's foothills.

Even today, Mount Ossa's slopes are an economically active landscape, where pastoralism, beekeeping, hunting, woodcutting and chestnut cultivation are widely practised. Yet both modern and pre-mechanised landuse patterns (documented for example by Leonardos 1836, 135–72) are highly localised, with many activities



Fig. 4. The view from the entrance of the Zar Trypa cave to the south toward the summit of Mount Ossa (March 2019).

economic activities would have required constant movement, been of a seasonal nature, and therefore left few archaeological traces. <sup>18</sup> In addition, they may have been tied to very specific social groups, with the result that the mountain's upper slopes may have been as unfamiliar to some as they were familiar to others. <sup>19</sup>

taking place at a considerably lower altitude than the Zar Trypa cave (1120 mamsl) and the Psila Dendra ridge (1231 mamsl). For example, Ottoman tax documents (Kiel 2002) and the accounts of J.J. Björnståhl (1783, 204), I.A. Leonardos (1836, 143, 155, 158–9, 166, 168) and H.F. Tozer (1869, 62) indicate that viticulture was once widely practised on Mount Ossa, but was largely confined to areas below 800 mamsl. For a more recent record of this distinctive land-use pattern, see also the vineyards marked on the 1940 1:100,000 German Army Map (sheet 7E "Larissa" and sheet 8E "Ajiia"). Similarly, modern chestnut cultivation on Mount Ossa is ecologically limited to slopes below *c.* 500 mamsl (Sivignon 1975, 79–80). For a general discussion of the economic use of ancient Greek uplands and other uncultivated landscapes, see for example Buxton 1992, 2–4; Forbes 1996.

For example, the results of stable isotope analyses of sheep and goat teeth from Hellenistic Kastro Kallithea in southern Thessaly include evidence for seasonal mobile flock management (Bishop 2021; Bishop et al. 2020), while vertical transhumance between winter pastures in the Almyros and Sourpi plains and summer pastures in the Othrys mountains was still practised at least as recently as the 1990s (Reinders and Prummel 1998, 86–9). In contrast, survivorship curves from the Classical and Hellenistic sites of Magoula Plataniotiki and New Halos (both on the Almyros plain) highlight the importance of local flock management strategies, perhaps due to the political instability of the region (Filioglou, Prummel and Çakirlar 2021). Judging by this case study, archaeologists should not necessarily assume that transhumance was a predominant practice in antiquity, even in areas where mobile flock management strategies existed in more recent periods. For a summary of epigraphic evidence for local and non-local grazing rights in ancient Thessaly, see Bishop 2021, 220–32.

<sup>&</sup>lt;sup>19</sup> For example, modern transhumance in the Almyros and Sourpi plains has mostly been practised by men (Reinders and Prummel 1998, 86).

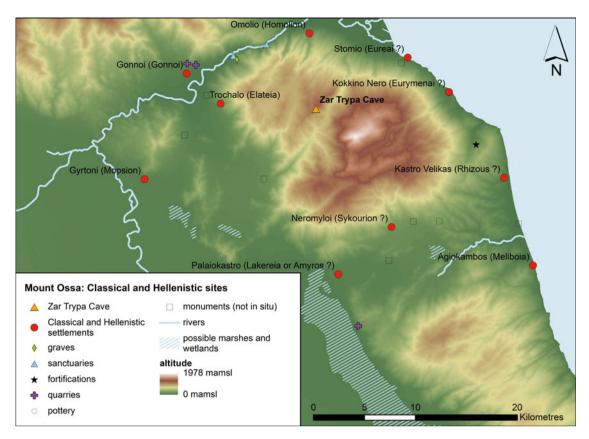


Fig. 5. Classical and Hellenistic sites on and around Mount Ossa.

The earliest archaeological investigations at the Zar Trypa cave were undertaken in the first decade of the twentieth century.<sup>20</sup> In February 1910, the site was visited by A.J.B. Wace and M.S. Thompson (together with H.A. Ormerod and their local guide K. Phrangopoulos), who published a brief description of the cave and its votive inscriptions (Wace and Thompson 1909). This account provides as yet the most detailed record of the epigraphic remains from the site, especially when read together with additional notes and drawings in A.J.B. Wace's unpublished notebook, now in the archive of Pembroke College, Cambridge.<sup>21</sup>

Shortly afterwards, in April 1910, A.S. Arvanitopoulos – better known for his research at Gonnoi and Demetrias – instigated the first excavations at the site, although he may not have participated personally in this work. The cave's inscriptions were transferred to the Museum of Larisa, but, after a few days, excavations were brought to a halt by heavy rain and were never resumed.<sup>22</sup>

Following this early phase of investigation, the site was considered lost until its 're-discovery' in 2009 by R. Wagman and A.G. Nichols from the University of Florida, with the help of I. Kontos from the village of Spilia (Wagman and Nichols 2015). By spring 2019, the cave had suffered some roof collapse in the eastern part of its upper 'chamber' and showed signs of recent use as an animal shelter.<sup>23</sup>

The Swedish traveller J.J. Björnståhl, who visited Mount Ossa in 1779, inquired without successes about 'a strange cave' and 'a stone with an inscription, which is said to be here' (Björnståhl 1783, 208–9), but it is unclear if the site in question is the Zar Trypa cave.

In the following, this notebook will be referred to by the archival reference code GBR/1058/WAC/1/5.

Arvanitopoulos 1910a, 183–4. Arvanitopoulos clearly hoped to continue the work at Zar Trypa (Wace and Thompson 1909, 247; Arvanitopoulos 1910a, 184), but no further excavations were carried out.

Wace and Thompson (1909, 243) already mentioned a rock-fall in this area, although some of the collapse observed in 2019 could be of more recent date.



Fig. 6. The narrow 'entrance-passage' of the Zar Trypa cave from the east (© Hellenic Ministry of Culture and Sports / Ephorate for Palaeoanthropology and Speleology; photo by the author).

In addition, several modern icons had been placed on a stone ledge near the entrance, demonstrating a renewed use of the cave as a sacred space.<sup>24</sup>

The cave of Zar Trypa consists of a series of connected underground spaces with extensive speleothem deposits. Its entrance is located in the south and is partly obscured by a large limestone outcrop, which forces the visitor to descend along a narrow, open, east—west 'passage' (Fig. 6). At the west end of this passage lies a small natural chamber, which is not directly connected to the main cave and has been used in recent times as a storage area or animal shelter.

The low entrance to the cave's main chambers is located on the north side of the passage. Crawling through an opening – too low to pass through upright – the visitor reaches the cave's large, flowstone-covered upper chamber, which measures c. 16 by 12 m (Fig. 7). The floor is tightly packed with earth and debris, and slopes towards the north-west, where a low, steep passage leads to a smaller lower chamber (c. 7 by 6.5 m). Like the upper chamber, this space is partly obscured by debris, but boasts impressive flowstone deposits along its walls (Fig. 8). A vertical opening leads from the lower chamber to a series of underground tunnels, which reportedly lead as far as 150 m into the hillside (Wagman and Nichols 2015, 89), but are impossible to explore safely without the expertise and equipment of a professional speleologist.

While Wace and Thompson did not record any objects other than the inscriptions and 'a few vase fragments of uncertain date' (Wace and Thompson 1909, 244), Arvanitopoulos' excavation uncovered a range of small finds: fragments of pottery (dated by the excavator to the fourth and third centuries BC), pieces of bronze fibulae, fragments of figurines, a Thessalian bronze coin of

The use of natural caves as chapels is comparatively common on Mount Ossa. Particularly prominent examples include the cave-chapel of Agia Paraskevi at Homolion (Hild et al. 1987, 82; Nikonanos 1997, 129–31; Sdrolia 2006, 404), the hermitage of Agios Panteleimon near Melivoia (Nikonanos 1997, 131) and the church of the Dormition of the Mother of God at Spilia (Wagman and Nichols 2015, 91).



Fig. 7. The upper chamber of the Zar Trypa cave, looking towards the entrance of the lower chamber (© Hellenic Ministry of Culture and Sports / Ephorate for Palaeoanthropology and Speleology; photo by the author).



Fig. 8. The flowstone deposits in the lower chamber of the Zar Trypa cave ( $^{\circ}$  Hellenic Ministry of Culture and Sports / Ephorate for Palaeoanthropology and Speleology; photo by the author).



Fig. 9. The uninscribed bases in the lower chamber of the Zar Trypa cave (© Hellenic Ministry of Culture and Sports / Ephorate for Palaeoanthropology and Speleology; photo by the author).

Antonine date and a bronze ring with a depiction of Eros holding a bow.<sup>25</sup> Unfortunately, Arvanitopoulos' brief report does not specify the approximate findspots of these objects, and their current whereabouts are unknown. But overall, the find assemblage seems consistent with the picture that has emerged over the past decades as typical for Greek cave-sanctuaries, with an emphasis on small, portable and possibly personal objects, rather than elaborate dedications. This pattern suggests that the 'humble' nature of the small finds at the Zar Trypa cave should not be taken as a reflection of the ancient visitors' socioeconomic status, but as an indication that religious practices at the site conformed to a wider devotional tradition shared by worshippers at many different rural sanctuaries, regardless of wealth or social status.<sup>26</sup>

In comparison to the small finds, the inscribed monuments from the Zar Trypa cave are comparatively well recorded. Wace and Thompson described fragments of one inscribed rectangular base and seven marble stelai,<sup>27</sup> to which two additional fragments were added during Arvanitopoulos' excavation (Wace and Thompson 1909, 247). Only one of these monuments – *McDevitt* 647, mentioned at the beginning of this paper – could so far be located in the storerooms of the Archaeological Museum of Larisa. However, two uninscribed rectangular bases can still be found on site (Fig. 9). They are currently located in the cave's lower chamber, but a sketch-plan in Wace's notebook (GBR/1058/WAC/1/5: 54r) suggests that at least one of them was originally placed in the upper part of the cave (Fig. 10).<sup>28</sup>

Judging by the published descriptions and the drawings in Wace's notebook (Fig. 11), the inscriptions from the Zar Trypa cave probably belong to the third and second centuries BC<sup>29</sup>

Wace and Thompson 1909, 247; Arvanitopoulos 1910a, 184–5. Wagman and Nichols (2015, 87–9) also noted numerous pottery sherds in the upper chamber, while the visit in 2019 confirmed the presence of black-glazed fragments within this assemblage. All visible surface material within the cave is strongly abraded and very fragmentary.

For typical votive categories at cave-sanctuaries, see Wagman 2016, 54; Sporn 2010, 568; 2013, 209. For the devotional tradition of 'rustic votives', see Larson 2001, 227–8.

For the original publication of the stelai and bases by Wace and Thompson (1909, 244–7) and their inclusion in subsequent corpora and catalogues, see above. Unless otherwise stated, the following discussion is based on Wace and Thompson's original description.

The two bases measure 49 by 49 cm and 45 by 45 cm respectively. A rectangular socket (measuring 28 by 18 cm and 25 by 18 cm) for the insertion of an object is cut in the top of each base. For the bases, see also Wace and Thompson 1909, 243–4; Wagman and Nichols 2015, 89.

Due to the comparatively small number of securely dated inscriptions from north-eastern Thessaly, the study of letter forms alone does not allow a more precise dating. For a discussion of the development of Thessalian letter

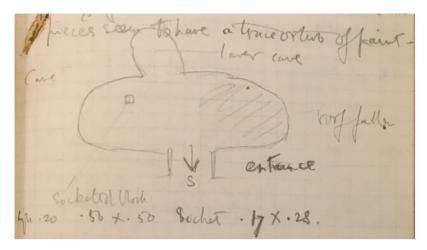


Fig. 10. The sketch-plan from A.J.B. Wace's notebook (GBR/1058/WAC/1/5: 54r), showing the location of a base in the upper chamber (by permission of the Master and Fellows of Pembroke College, Cambridge).

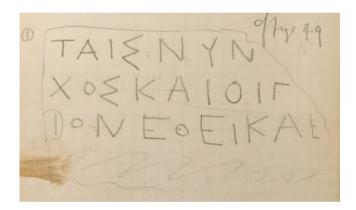


Fig. 11. A drawing of the inscription *McDevitt* 643 from A.J.B. Wace's notebook (GBR/1058/WAC/1/5: 52v; by permission of the Master and Fellows of Pembroke College, Cambridge).

and thus fall within a period of considerable social and political volatility in north-eastern Thessaly.<sup>30</sup> The stelai were worked with 'roots' to set them into a base or the bedrock and with the exception of two pedimental stelai were flat-topped – a common type in Late Classical and

forms, see for example Helly 1973, 174–6; Heinz 1998, 160–8; for the dating of the stelai from the Zar Trypa cave, see Heinz 1998, 315–17, 429; Wagman and Nichols 2015, 91. Heinz (1998, 429) suggested a 4th-century BC date for the inscribed base *McDevitt* 643, but the drawing in A.J.B. Wace's unpublished notebook (GBR/1058/WAC/1/5: 52v) shows letter-forms that are more consistent with a date in the second half of the 3rd century BC (Heinz 1998, 162–7). Similarly, the additional information provided by the drawings suggests a 2nd-century BC date for the stele *McDevitt* 645.

<sup>&</sup>lt;sup>30</sup> For military conflicts and political upheavals in 3rd- and 2nd-century BC Thessaly and their economic consequences, see for example Helly 1973, 99–104; Walsh 2000; Helly 2007; Zelnick-Abramovitz 2013, 121–7; Bouchon 2014. Focusing on Mount Ossa, literary sources attest military actions around the mountain's foothills during the Second Macedonian War (e.g. Polybius 18.27, 18.33; Livy 32.15) and the Third Macedonian War (e.g. Livy 42.61–7), while epigraphic sources bear witness to a grain shortage at Gonnoi in the first half of the 2nd century BC (*Gonnoi* 42). Due to the comparatively broad date range of the inscriptions from the Zar Trypa cave, it is however impossible to position the individual monuments more precisely within the political context of this turbulent period.

Hellenistic north-eastern Thessaly.<sup>31</sup> On discovery, at least two of the monuments still bore slight traces of paint (Wace and Thompson 1909, 244).

Even by 1910, all seven stelai only survived in fragments, but as far as it is possible to determine, the smallest of the monuments (*McDevitt* 646) originally measured 26 cm in width and 26 cm in height, the largest (*McDevitt* 647) 66 cm in width and 49 cm in height.<sup>32</sup> Although in other regions such stelai would count as comparatively minor, their size falls well within the typical range of Thessalian inscribed votives<sup>33</sup> and even includes one of the largest flat-topped votive stelai thus far recorded in Thessaly.<sup>34</sup> This contextualisation stresses the importance of the Zar Trypa cave as a cult site and re-emphasises that the cave-sanctuary was not visited solely by worshippers of 'humble' socioeconomic status.

Both conclusions become even more apparent when the material of the stelai and bases is taken into account. According to Wace and Thompson (1909, 244–6), all eight inscribed monuments were carved in marble, probably a grey marble similar to the material used for the surviving stele in the Archaeological Museum of Larisa. The exact provenance of this material is uncertain, but the nearest possible extraction sites known to have been exploited in antiquity lie in the north-western foothills of Mount Ossa and in the Tempe valley.<sup>35</sup> These quarries are located less than 15 km from the Zar Trypa cave, but are separated from the site by a difference of around 1110 m in altitude. Given that the cave's largest surviving stele must have weighed around 68 kg, pack-animals such as mules or donkeys were probably required for most stages of the journey between the quarry and the sanctuary, although at least from the mouth of the cave onwards the monuments had to be shifted with human muscle power alone.<sup>36</sup>

Moving from the objects in general to the specific inscriptions, the inscribed monuments provide important information about the cult and selected cult participants at the Zar Trypa cave. All eight monuments can be identified (with varying degrees of certainty) as dedications to the Nymphs, who are the most commonly worshipped deities at cave-sanctuaries throughout the Greek world.<sup>37</sup> One inscription from the Zar Trypa cave (*McDevitt* 646) was dedicated Όρει[άσιν ('to the Oreiads') or 'Ορεί[αις Νύμφαις ('to the Mountain Nymphs') – a title that is so

The chronological and geographic distribution of this stele-type has been discussed in detail by Heinz (1998, 117), who noted that flat-topped votive stelai are particularly common at Atrax, Elateia, Gonnoi and Larisa.

These measurements exclude the root. If the root is included, the smallest stele stands 30 cm tall, the largest 52.5 cm.

<sup>&</sup>lt;sup>33</sup> According to Heinz (1998, 117), Thessalian flat-topped votive stelai usually measure between 23 cm and 43 cm in height.

For the dimensions of Thessalian flat-topped votive stelai in general and for individual large examples from Atrax, Elateia and Gonnoi, see Heinz 1998, 117, 199, 233, 363–4.

Nearby marble extraction sites, which were active during the Hellenistic period, include the quarries at Gonnoi (Karagiorgou 2001, 174–5; Melfos 2004, 1169–70; Kokkorou-Alevra et al. 2014, 76), in the Tempe valley (Karagiorgou 2001, 171–2; Melfos et al. 2010, 850–1; Kokkorou-Alevra et al. 2014, 77) and at Kastri (Papageorgakis 1963, 566–8; Gast, German and Eilert 1979, 53; Higgins and Higgins 1996, 92; Karagiorgou 2001, 172; Melfos, Vavelidis and Theodorikas 2002, 1538–9; Kokkorou-Alevra et al. 2014, 75). During the Roman and Byzantine periods, marble was also extracted at Ampelakia (Sythiakaki 1999; Kokkorou-Alevra et al. 2014, 75–6) and at Chrapes (Arvanitopoulos 1911, 292; Melfos 2004, 1166–9; Sdrolia 2008, 714; 2012, 585–6; Kokkorou-Alevra et al. 2014, 78).

The weight of the largest stele (*McDevitt* 647) was calculated by multiplying its estimated volume (*c.* 0.025 m³) by the average density of marble (2.71 g/cm³ [Siegesmund and Dürrast 2011, 103]). For the average load-carrying capacity of human porterage, see Bevan 2013, 6; for the load-carrying capacity of pack-animals, see Vigneron 1968, 135; Cotterell 1990, 194; Roth 1999, 205–7; Adams 2007, 77–81; Raepsaet 2010, 589; Bevan 2013, 6; Mitchell 2018, 24.

<sup>&</sup>lt;sup>37</sup> For the worship of the Nymphs at Greek cave-sanctuaries, see for example Sporn 2007, 56; Ustinova 2009, 55; Sporn 2013, 203. At the Zar Trypa cave, the fragmentary dedication *McDevitt* 648 only preserves the initial word Πάνσας, but in view of the site's epigraphic assemblage, the reconstruction Πάνσας [νύνφας (already suggested by Wace and Thompson 1909, 246) seems likely. The Nymphs were frequently associated with mountainous environments (Langdon 2000, 466–7; Larson 2001, 8–9; 2007, 62); for a possible connection between Mount Ossa and the Nymphs in Classical literary sources, see the much-disputed passage Euripides, *Electra* 445–8.

far without epigraphic parallels.<sup>38</sup> Like the noun ὄρος ('mountain'), Όρειάς may have carried a variety of different connotations,<sup>39</sup> but without further parallels this remains difficult to assess. It is, however, clear that both 'Oreiads' and 'Mountain Nymphs' would be an eminently suitable name for a group of deities worshipped at an altitude of 1120 mamsl.

Besides identifying the Nymphs as the main cult recipients, the inscriptions offer some glimpses of individuals at the Zar Trypa cave. While the site's small-finds are not recognisably 'gender-specific', the inscriptions demonstrate that dedications were made by both men and women, possibly including a 'family group' of a male individual and his children (McDevitt 643).<sup>40</sup> The personal names of two dedicants survive in full or have been reconstructed with reasonable certainty: 'Leon, the son of Antigonos' (LGPN iiib.13541; McDevitt 645).<sup>41</sup> and 'Enpedokleia, the daughter of Philodamos' (LGPN iiib.10221; McDevitt 646).<sup>42</sup> The surviving letters on a third stele (McDevitt 647) were reconstructed by Wace and Thompson (1909, 245) as [ $N\dot{v}$ ]v0 were v10 and v21 and v32 and v33 and v34 and v34 and v34 and v34 and v35 as v36 as v36 and v3

<sup>&</sup>lt;sup>38</sup> Wace and Thompson (1909, 245) recorded the first line of this inscription as OPEI ---- and suggested a restoration as 'Oρει[άσιν]. Besides 'Ορει[άσιν], 'Ορεί[αις νύμφαις or 'Ορεί[αις νύνφαις may also be possible, although a drawing in Wace's notes could indicate that the stone lacked the space for the necessary 14 letters in its first line (GBR/1058/WAC/1/5: 53r). In theory, another possible restoration would be 'Ορεί[αι Μητρί]. A Thessalian cult of the Mother of the Gods as Μήτηρ ὀρεία is attested through a late 4th- or early 3rd-century BC inscribed gold lamella from a cremation burial in Pherai (SEG 55.612; discussed in detail by Parker and Stamatopoulou 2004, 14–15), but its funerary context is clearly very different to the cave-sanctuary at Zar Trypa. A restoration of McDevitt 646 as 'Ορεί[αι Μητρί] is therefore unlikely. For the term 'Ορειάδες in 2nd-century BC literary sources, see for example Bion 1.19; for the related term ὀρεστίας, see Homer, Iliad 6.420; Homeric Hymns, Hymn to Pan 19.

<sup>&</sup>lt;sup>39</sup> For a range of common associations with the term ὄρος in Classical and Hellenistic Greece (e.g. as extra-urban spaces 'beyond', as areas of specific resource managements, or as meeting places between gods and mortals), see for example Buxton 1992, 2–6; Larson 2001, 9; 2007, 62.

<sup>&</sup>lt;sup>40</sup> According to the drawing in Wace's notebook (GBR/1058/WAC/1/5: 52v) and the description published by Wace and Thompson (1909, 244), the second line of this inscription reads XOΣ KAI OI  $\Pi$ [, restored by the editors as  $-\chi_{0\zeta}$  καὶ οἱ  $\pi$ [αῖδες. Alternatively, a restoration as  $-\chi_{0\zeta}$  καὶ οἱ  $\pi$ [ρουροί could also be considered. Several 3rd-, 2nd- and 1st-century BC dedications by an individual ἀρχίφρουρος and a group of φρουροί are known from Gonnoi and Elateia (see for example Heinz 1998, 20–1; Baker 2001, 193; Mili 2011, 169–70; Helly 2013, 106–8; Mili 2015, 106; Kravaritou 2018, 383), with the spelling προυροί attested by *Gonnoi* 147 (3rd-century BC). Yet these dedications usually refer to the φρουροί as σύμφρουροι or σύνφρουροι, and no example preserves the name of an individual or a term ending in  $-\chi_{0\zeta}$  immediately before the phrase καὶ οἱ φρουροί or καὶ οἱ προυροί. For *McDevitt* 643, the restoration καὶ οἱ  $\pi$ [αῖδες therefore seems more likely.

According to Wace and Thompson (1909, 245) and the notes in GBR/1058/WAC/I/5: 53r, the surviving letters of the inscription McDevitt 645 read  $\Lambda E\Omega[...]TI\Gamma O[|N\Upsilon M\Phi AI\Sigma E\Upsilon EA[$  and could represent either a dedication of two individuals ( $\Lambda \acute{e}\omega v$ ,  $[\Lambda v] τίγο [vος ταῖς] | νύμφαις εὐξά[μενοι])$  or of a single person ( $\Lambda \acute{e}\omega v$   $[\Lambda v] τιγό [vου ταῖς] | νύμφαις εὐξά[μενοι]). On Thessalian votive inscriptions, the names of several dedicants usually only appear without a connecting καί in longer lists (see for example <math>Gonnoi$  148 [3rd century BC], Gonnoi 150 [2nd century BC] or SEG 23.444 [1st century BC]). Although rare exceptions to this general rule do exist (e.g. I.Atrax 65 [3rd or 2nd century BC] and IG 9(2).303 [2nd century BC]), the latter reading is therefore more likely.

monument was dedicated by a single person (Mikra, the daughter of Damosthenes) or two individuals (Mikra and Damostheneia).<sup>43</sup>

While the latter interpretation cannot be excluded, several observations point towards the former: firstly, inscriptions mentioning several dedicants without a connecting  $\kappa\alpha$ i are rare among Thessalian votives, <sup>44</sup> and a closer examination of McDevitt 647 in the Archaeological Museum of Larisa suggests that the space between the surviving letters M<sub>1</sub>[ and ]αμοσθενεία is not sufficient for the reconstruction M<sub>1</sub>[κρα καὶ Δ]αμοσθενεία. Secondly, 'Damostheneia' is thus far only attested in Thessaly as a patronym and not as a female given name in its own right. <sup>45</sup> Thirdly, the spelling εὐξαμένα instead of εὐξαμένη is not uncommon in the region. <sup>46</sup> This means that, rather than belonging to the participle εὐξάμεναι, the final stroke visible on the inscription could be the beginning of another word, perhaps part of a formula beginning with πέρ (e.g. πὲρ γενεᾶς as in the dedication McDevitt 646 [Helly 2013, 104]). <sup>47</sup> While any further restoration would be mere speculation, the combined force of all three observations suggests that the stele McDevitt 646 was most likely dedicated by a single individual named 'Mikra, the daughter of Damosthenes'.

As Wace and Thompson (1909, 245) already noted, a 'Mikra, the daughter of Damosthenes' also appears on a late fourth- or early third-century BC Thessalian list of female names from Phalanna or Larisa (*IG* 9(2).1227 [*LGPN* iiib.14503]).<sup>48</sup> Chronologically, it is possible that the 'Mikra, the daughter of Damosthenes' mentioned on this list and on the stele *McDevitt* 646 are the same individual. If this identification were correct, it would emphasise the cave-sanctuary's importance beyond the 'local' area of eastern Mount Ossa.

Three inscriptions from the Zar Trypa cave also include the common formula εὐξάμενος / εὐξαμένη ('in fulfilment of a vow'; McDevitt 645, 647 and 650),<sup>49</sup> while Enpedokleia specified that her stele was dedicated πὲρ γενεᾶς (McDevitt 646). The meaning of this expression is not entirely clear and could either denote that Enpedokleia's dedication was made for the sake her existing family<sup>50</sup> or in the hope of future children.<sup>51</sup> Regardless of which interpretation is more

Wace and Thompson 1909, 245–6; Heinz 1998, 317; Helly 2013, 104. Bouchon and Helly (2016, 132) suggested an alternative restoration as Mί[κκα.

For the rarity of this phenomenon outside lists of dedicants, see above.

<sup>&</sup>lt;sup>45</sup> IG 9(2).1227 (LGPN iiib.14503). Since this stele contains a list of names (presumably in the same format) it is reasonably certain that 'Damostheneia' functions as a patronym. For a more detailed discussion of this inscription, see below

<sup>&</sup>lt;sup>46</sup> See for example *I.Atrax* 131 (3rd or 2nd century BC), *SEG* 51.734 (Hellenistic) and *IG* 9(2).577 (2nd century BC or later) (Heinz 1998, 414).

With space for c. nine letters between the break and the edge of the inscription, this restoration would be possible.

 $<sup>^{48}</sup>$  IG 9(2).1227 is attributed by O. Kern to Phalanna, possibly because of its former location in the museum of Tyrnavos (Wilhelm 1890, 316). However, three of the names included in IG 9(2).1227 also occur on inscriptions from Larisa (SEG 35.591 [late 4th or early 3rd century BC] and IG 9(2).571 [3rd century BC]). These prosopographic parallels not only suggest that IG 9(2).1227 belongs to the late 4th or early 3rd century BC, but also that the inscription was originally from Larisa and was transported to Phalanna at a later date (Tziafalias 1984, 219–20; Helly 1988, 420; Kontogiannis 2009, 44; Tziafalias and Santin 2013, 255). For the identification of the individuals attested in McDevitt 647 and IG 9(2).1227, see also Helly 2013, 104; Bouchon and Helly 2016, 132; for the interpretation of IG 9(2).1227 as a collective dedication, see for example Mili 2015, 85. The name Mikpα (without a patronym) is also attested in I.Atrax 198, a 4th-century BC funerary stele from Atrax.

<sup>&</sup>lt;sup>49</sup> On the use of the participle εὐξάμενος / εὐξαμένη in Thessalian votive inscriptions, see for example Heinz 1998, 14; Mili 2015, 22.

This use of the preposition ὑπέρ is, for example, attested in Thessaly through the inscription IG 9(2).1221 (2nd century BC), which was made for the brother of the dedicant and clearly refers to an existing family member. For the different uses of ὑπέρ in Greek dedications, see also Jim 2014.

<sup>&</sup>lt;sup>51</sup> The Epidaurian inscription IG 4[2].121 (4th century BC) provides a clear example of this use of ὑπέρ. On the connection between cults of the Nymphs and various events in the female life-cycle, see for example Larson 2001, 100–20; 2007, 61; Sporn 2007, 59–60; 2013, 208. Enpedokleia's dedication πὲρ γενεᾶς has also been interpreted as an offering made after a successful birth (see for example Moustaka 1983, 47; Larson 2001, 238; Rakatsakis and Tziafalias 2004, 92–3; Sporn 2007, 60; 2013, 208).

appropriate, the dedications from the Zar Trypa cave clearly emphasise the 'personal' nature of religious practices at the site.<sup>52</sup>

#### EXPERIENCE: ENTERING THE CAVE

For the men, women and possibly children making dedications and participating in other religious activities at the Zar Trypa cave, the sensory and kinaesthetic aspects of visiting this particular sacred space must have formed an important part of their overall religious experience. For the purpose of analysis, this experience can be said to include three consecutive and interlinked, but also temporally and spatially distinct, 'stages': the approach to the Zar Trypa cave, the time spent within the 'sacred space' (including the descent into and the ascent from the cave) and the return from the site.

Focusing first on sensory and kinaesthetic experiences within the spatial 'semi-micro level' of the site,<sup>53</sup> one of the most distinctive and formative features of the 'sacred space' is its cave setting.<sup>54</sup> Cave-experiences are many-sided and can vary considerably depending on factors such as the layout and accessibility of a particular site, the social and cultural context of a visit, or even the personality and biography of the individual visitor.<sup>55</sup> This specificity makes it difficult to generalise on the effect that entering a cave or cave-sanctuary may have had on a visitor in antiquity.<sup>56</sup> However, as in the case of built sanctuaries, it is possible to reconstruct some aspects of the sensory experiences involved in visiting specific caves, without any claim to a complete reconstruction and without assuming any kind of all-encompassing empathic unity to human experience.

Caves (especially those with narrow entrances like the Zar Trypa cave) are very clearly bounded spaces, unambiguously defined and delineated by the solid natural rock that forms their walls, floors and ceilings. Many sensory experiences within this space are distinctly different from those immediately outside the cave's entrance. A visitor's sight has to adapt gradually to different levels of darkness, the temperature drops, the air is still but smells moist and earthy, external sounds are muffled, and even familiar voices resonate strangely within the cave's chambers. Some of these sensory differences between the cave and the 'outside-world' can be heightened by particular weather conditions. For example, the darkness of the Zar Trypa cave is particularly striking on a bright spring or autumn day, when the summit of Mount Ossa – visible across the Megalo Pharagi valley – is covered in dazzlingly white snow (Fig. 4).<sup>57</sup>

<sup>&</sup>lt;sup>52</sup> It would be tempting to connect the absence of ethnics among the surviving inscriptions to this 'personal' nature of religious practices at the Zar Trypa cave, but in general Thessalian votive inscriptions only rarely include any information about the dedicants' origins (Heinz 1998, 16).

<sup>&</sup>lt;sup>53</sup> For the concept of 'micro level' (within a structure), 'semi-micro level' (within a site) and 'macro level' (between sites) resolutions in spatial archaeology, see Clarke 1977, 11–17, for the use of this concept in the study of religious sites, see Raja and Rüpke 2015, 5.

On the importance of the natural ambience of caves as a formative background for religious experiences, see for example Papalexandrou 2020. At many Classical and Hellenistic sacred caves on the Greek mainland and the islands, dedications and other traces of ritual activity are found primarily in the area around the caves' entrances (Sporn 2020, 172, 175–6), but at Zar Trypa the space in front of the cave is severely limited by the steep and rocky terrain. In addition, there are no visible cuttings, which would suggest that the site's stelai were originally not displayed outside the cave.

Ustinova 2009, 52; Whitehouse 2016, 34–5; Skeates 2016, 48. The two Thessalian cave-sanctuaries with evidence for a cult of the Nymphs (at Zar Trypa and at Mount Karaplas) are strikingly different in access and layout. For the sensory experience of visiting the cave-sanctuary at Mount Karaplas, see Wagman 2016, 32–4.

<sup>&</sup>lt;sup>56</sup> Even literary and epigraphic testimonies are not of universal significance. For example, Seneca (*Epistulae* 4.41.3) famously commented on the overwhelming effect of a cave's numinosity, but this reaction is specific to the writer, or even to the writer entering particular types of caves.

<sup>&</sup>lt;sup>57</sup> For previous studies on the sensory experiences of entering particular caves, see for example Whitehouse 2016; Skeates 2016. For the neuropsychological effects of entering a cave environment (discussed in more detail below), see Ustinova 2009, 32–41.



Fig. 12. The flowstone deposits in the upper chamber of the Zar Trypa cave (© Hellenic Ministry of Culture and Sports / Ephorate for Palaeoanthropology and Speleology; photo by the author).

Yet while the internal space of the Zar Trypa cave is clearly delineated and distinct from the 'outside-world', its boundaries are difficult to map. Visitors are at first disorientated by the murky darkness of the cave and even once their eyesight has adapted to the underground conditions or the cave has been lit by an artificial source of light, the flowstones and stalactites of the cave's speleothem deposits create an effect of light and dark shadow that visually blurs and disguises the boundaries of the sacred space (Fig. 12).

As well as being a bounded space, the Zar Trypa cave is a transitional or liminal area that connects the 'outside-world' with the underground tunnels reaching far into the hillside. Movement through this transitional area – from the mouth of the cave to its dark interior – is structured by natural 'thresholds' into several stages: descending into the narrow but open entrance passage, passing underneath the rock that forms the lintel of the outermost entrance, crawling through the low opening into the upper chamber and finally descending into the lower chamber. With every threshold, the visitor enters an increasingly unfamiliar and 'alien' space in which many sensory stimuli that connect the visitor to the 'outside world' (e.g. light or sounds from above) gradually diminish. Leaving the cave can be an equally complex experience, in which the visitor progressively returns to a more familiar environment, but at the same time emerges dazzled by the now unfamiliar stimuli of the open hillside.

In antiquity as today, the effects of this 'sensory journey' were mediated by factors such as cultural context and personal experiences. Specific religious practices would also have shaped the visitor's sensory experience, for example by dictating the particular time of year and day for a visit or by requiring the performance of particular rituals at the site. Large parts of the 'religious experience' at the Classical and Hellenistic Zar Trypa cave are thus impossible to reconstruct and irretrievably lost.

However, some effects of the 'sensory journey' into the Zar Trypa cave are a direct result of the environmental conditions that prevail in dark and partially 'sound proof' underground spaces. The deeper the visitor descends into the cave, the fewer external stimuli (especially visual) he or she experiences. While extended 'sensory deprivation' can result in drastic effects such as hallucinations, a moderate reduction of external stimuli – as experienced during a visit to an underground space like the Zar Trypa cave – can focus the mind on specific and limited remaining stimuli (e.g. a single light, sound or touch) and thus heighten a specific experience.<sup>58</sup>

On the effects of different levels of 'sensory deprivation', especially with regards to cave settings, see for example Ustinova 2009, 32–41; Dowd 2015, 7–9; 2019, 199–200 (with extensive references to previous studies).

Regardless of cultural context and personal experiences, the natural ambience of the Zar Trypa cave thus provides a formative background for religious activity at the site, naturally enhancing specific experiences through the visitors' heightened attention on limited sensory stimuli. In consequence, 'religious experiences' that were clearly different to and distinct from other everyday activities were attainable for any visitor to the site – regardless of gender, age and socioeconomic status – and could if necessary be achieved without elaborate paraphernalia or complex ritual activities. This makes the Zar Trypa cave an ideal space for a cult with a 'personal' focus, as reflected in the surviving dedications from the site.

In the absence of more detailed epigraphic evidence, it is impossible to reconstruct how ancient visitors to the Zar Trypa cave viewed their own 'religious experience'. One possible framework is the phenomenon of nympholepsy – the belief that the Nymphs could 'seize' certain individuals, inducing various psychophysiological responses (e.g. heightened awareness or elevated verbal skills) and in some cases leading to exceptional acts of devotion.<sup>59</sup> One important Thessalian point of reference is a fourth- or third-century BC rock-cut inscription from the cave-sanctuary at Mount Karaplas near Pharsalos, which recounts how a certain Pantalkes was chosen by the Nymphs to oversee their sanctuary.<sup>60</sup> Although it is impossible to establish whether visitors to the Zar Trypa cave may have viewed themselves as 'seized by the nymph', the phenomenon of nympholepsy is thus attested in Late Classical or Hellenistic Thessaly and offers one possible conceptional framework for the 'sensory journey' through the Zar Trypa cave.

#### EXPERIENCE: APPROACHING THE CAVE

Besides the Zar Trypa cave's underground setting, a key feature in the 'religious experience' of visiting this particular sacred space is its remote location. As noted above, the cave is situated at an unusually high altitude, far above and several kilometres away from the nearest known ancient settlement. Consequently, the movement to and from the Zar Trypa cave would have formed an integral part of most visits to the site in antiquity.<sup>61</sup>

Yet investigating such 'macro-level' movement between different ancient sites – whether in a religious context or not – is methodologically challenging. On Mount Ossa, comparatively few remains of ancient roads and paths have thus far been uncovered,<sup>62</sup> and depending on the mode of transport, scholars should not expect every ancient path to leave archaeological traces or to be clearly marked in the first place. To use a modern parallel, anyone who has walked across the Greek countryside with a local shepherd, goatherd or hunter will have encountered a complex

On the phenomenon of nympholepsy in ancient Greek religion, see for example Connor 1988; Larson 2001, 13–18; Pache 2011. For possible connections between this phenomenon and 'cave experiences', see Ustinova 2009, 61–5.

The cave-sanctuary at Mount Karaplas near Pharsalos (including its finds and inscriptions) is discussed in detail by Wagman (2016). The name Pantalkes appears in two rock-cut inscriptions at the cave, one dating to the first half of the 5th century BC (SEG 1.247; I.Vallée Enipeus 72) and the other dating to the 4th or early 3rd century BC (SEG 1.248; I.Vallée Enipeus 73). For the date of these inscriptions, see Wagman 2016, 57, 66. While some scholars have suggested that both inscriptions date to Pantalkes' lifetime (for example Larson 2001, 18; Ustinova 2018, 258), Wagman (2016, 85–93) argues that the latter text was inscribed after Pantalkes' death and therefore provides evidence for a constructed rather than a real figure. Nonetheless, the inscription suggests that the phenomenon of nympholepsy was known in 4th- or early 3rd-century BC Thessaly.

<sup>&</sup>lt;sup>61</sup> As argued above, the find assemblage at the Zar Trypa cave cannot be explained satisfactorily as an accumulation of votives dedicated by visitors of low socio-economic status (e.g. passing shepherds). Since there is little evidence that routes across Mount Ossa were in regular use as part of a larger network of overland travel, this study focuses on purposeful journeys to the cave, rather than the 'opportunistic' dedication of objects while travelling between different sites.

<sup>&</sup>lt;sup>62</sup> For literary testimonies and archaeological remains of ancient routes across Mount Ossa, see for example Stählin 1924, 45; Nikonanos 1973, 48; Avramea 1974, 80–3; Koder and Hild 1976, 91; Decourt and Mottas 1997, 343; Sdrolia 2006, 403–7; Pikoulas 2016. However, most archaeological traces of pre-modern routes post-date the Hellenistic period.

network of paths or *monopatia* which are commonly shared and widely used, but unmarked and only visible to those with local knowledge.

In the face of these challenges, GIS-based 'cost surfaces' and 'least cost path analyses' have become an increasingly common tool in the archaeological study of ancient 'macro-level' movement. To identify an optimal route through a landscape (a 'least cost path'), the local topography is represented through a raster map, in which every cell is assigned the 'cost' necessary to traverse the cell (e.g. the time or effort). This raster is used to calculate a cumulative cost surface relative to a specific origin of travel and provides the basis for constructing the most 'efficient' route – the 'least cost path' – from the chosen point of origin to a particular destination. This approach may look beguilingly 'factual', but in reality is anything but objective: the cost paths are a direct result of the function chosen by the archaeologist to represent the relationship between cost and topography, i.e. to generate the cost surface. When investigating an archaeological landscape like Mount Ossa, it is thus crucial to identify a cost function that is appropriate to the specific topographical setting and likely means of transport.

For most travellers in antiquity, walking was the standard method of movement (Pikoulas 2007, 79; Collar 2020, 37), even across distances which most modern scholars would find challenging. Travel by donkey or mule would also have been possible on Mount Ossa's steep and rocky terrain; in fact, the weight of the inscribed monuments at the Zar Trypa cave strongly suggests that they reached the site by pack-animal rather than through human muscle power alone.

Footpaths and donkey-tracks continued to feature prominently in the landscape of north-eastern Thessaly well into the modern period. One notable example is the track between the mountain villages of Ampelakia and Spilia, which is comparatively well-described in a nineteenth-century source. 66 Using this route as a point of reference, it is possible to compare and evaluate the suitability of different least cost path functions for the analysis of movement on ancient Mount Ossa.

For the current study, four different least cost path functions were considered. The first two are based on the so-called 'Tobler's Hiking Function', which – on the basis of empirical data – describes the relationship between slope and walking speed.<sup>67</sup> While the original 'Tobler's Hiking Function' is anisotropic (i.e. different for uphill and downhill slopes), both functions used here are isotropic to account for bidirectional movement. The third function is based on a version of 'Tobler's Hiking Function' adapted for travel in natural areas,<sup>68</sup> while the fourth describes the relative energy cost necessary to traverse different slopes.<sup>69</sup>

When applied to Mount Ossa, three of the four functions – 'Tobler's Hiking Function' (as applied by White 2015), the modified 'Tobler's Hiking Function' and the energy cost function – produce near-identical least cost paths, which provide a suitably close match to the actual route

<sup>&</sup>lt;sup>63</sup> Fachard and Pirisino 2015; McHugh 2017; Seifried 2017; McHugh 2019; Ludwig 2020 offer some recent examples of the application of 'least cost path analyses' in the study of Classical and Hellenistic Greece.

<sup>&</sup>lt;sup>64</sup> For the relationship between specific functions and the resulting least cost paths, see for example Kantner 2012; Herzog 2013; 2014; Seifried and Gardner 2019.

Religiously motivated journeys seem to have been no exception. For example, Xenophon's Socrates mentions the possibility of walking from Athens to Olympia within five or six days (Xenophon, *Memorabilia* 3.13.5).

<sup>&</sup>lt;sup>66</sup> Leonardos 1836, 160. The same path also features in the report of the 18th-century traveller J.J. Björnståhl (1783, 211–12).

Tripcevich 2009; White 2015. All cost-surfaces, least cost paths and viewsheds were calculated with ArcGIS 10.7.1 on the basis of the European Digital Elevation Model (EU-DEM) (resolution 25 m) (available online <a href="https://land.copernicus.eu/imagery-in-situ/eu-dem/eu-dem-v1.1">https://land.copernicus.eu/imagery-in-situ/eu-dem/eu-dem-v1.1</a> accessed May 2021).

<sup>&</sup>lt;sup>68</sup> Márquez-Pérez, Vallejo-Villalta and Álvarez-Francoso 2017. Again, the function was implemented to represent isotropic rather than anisotropic movement.

Minetti et al. 2002. This method has previously been used to investigate routes of movement and cost surfaces in Attica and Euboea (see for example Knodell 2013; Fachard and Pirisino 2015; Fachard 2017; Knodell 2017; Fachard and Knodell 2020). Following the example of Knodell (2017, 198), values of walking uphill and downhill were added together in order to simulate bidirectional cost paths.

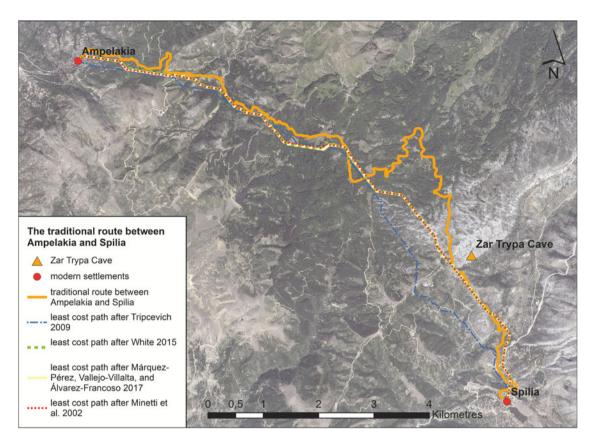


Fig. 13. Comparing the traditional route between Ampelakia and Spilia with the results of four different least cost path analyses: 'Tobler's Hiking Function' (after Tripcevich 2009 and White 2015), the modified 'Tobler's Hiking Function' (after Márquez-Pérez, Vallejo-Villalta and Álvarez-Francoso 2017) and the energy cost function (after Minetti et al. 2002).

between Ampelakia and Spilia (Fig. 13).7° 'Tobler's Hiking Function' and the modified 'Tobler's Hiking Function' also provide an estimated walking time in hours (Fig. 14), of which the latter corresponds more closely to the five-to-six hours required to walk the distance between Ampelakia and Spilia today.<sup>71</sup> Among the four compared functions, the modified 'Tobler's Hiking Function' thus offers the most promising tool for investigating 'macro-level' movement between the Zar Trypa cave and the surrounding ancient settlements.

The first feature highlighted by such an analysis is the remoteness of the cave. This characteristic becomes particularly evident when calculating the 'cost boundaries' between the surrounding settlements, i.e. identifying which areas are most quickly accessible from which urban centre (Fig. 15). Although depending on the means of transport actual travel times could be shorter than the calculated 'walking distances' suggest,<sup>72</sup> the cost boundaries demonstrate that the Zar Trypa cave is not located significantly 'closer' to one of the settlements than to any other. Instead, the cave-sanctuary lies in a 'liminal' space between the different urban centres – if not politically, then at least with regards to accessibility.<sup>73</sup>

The divergence in the eastern part of the route may well be a result of the resolution of the DEM (25 m), but thus far a more detailed DEM is not freely available for the region.

<sup>&</sup>lt;sup>71</sup> Matsouka et al. 2007. Björnståhl (1783, 212) also gave the travel time between Ampelakia and Spilia as six hours, although it is not clear whether he travelled on foot or horseback.

For a comparison of estimated travelling speeds by different means of transport, see for example Bevan 2013, 6.

This situation mirrors the location of many mountaintop sanctuaries, which are often not clearly associated with a particular city-state (Langdon 2000, 462).

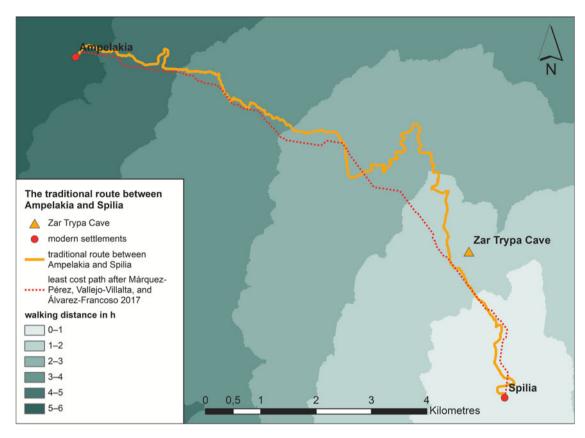


Fig. 14. The traditional route between Ampelakia and Spilia: least cost path and 'walking distance'.

Examining the spatial relationship between the Zar Trypa cave and the surrounding settlements in more detail, the modified 'Tobler's Hiking Function' provides estimates for the walking times required to travel to and from the cave (Fig. 16).<sup>74</sup> For the inhabitants living at or around the nearest known settlements – at the archaeological sites of Elateia (Pelasgiotis), Gonnoi (Perrhaibia) and Homolion (Magnesia) – participation in religious activities at the Zar Trypa cave required a combined outbound and return journey of at least 8 to 12 hours, assuming that the participants travelled on foot and did not stop for any lengthy 'breaks' along the route.

In reality, these figures may well be an underestimate. Since GIS-based movement analyses prioritise certain decision-making factors – in this case the slope – over others, it is very likely that many ancient paths and tracks did not strictly follow what an archaeologist might see as the most efficient routes through Mount Ossa's landscape. For example, the current GIS-model does not take into account differences in surface vegetation, minor watercourses, the accumulation of surface runoff water or the location of springs, all of which may lead to divergences from the most 'efficient' routes and therefore to longer overall travel times. 'Walking times' are also strongly dependent on individual physiology and thus would differ according to the age, sex, build and health of the visitors at the Zar Trypa cave.

In addition, the weight and size of the inscriptions from the Zar Trypa cave suggests that at least some of the monuments were transported to the sanctuary on the back of pack-animals. To the author's knowledge, no equivalent of 'Tobler's Hiking Function' for donkeys or mules exists as yet, but on average a pack-donkey moves at just over half the speed of a pedestrian travelling

<sup>&</sup>lt;sup>74</sup> Since the modified 'Tobler's Hiking Function' was implemented in this study to represent isotropic rather than anisotropic movement, the resulting 'walking distances' provide an average figure that does not distinguish between uphill and downhill travel, but nevertheless gives estimates for 'round-trips' to and from the cave.

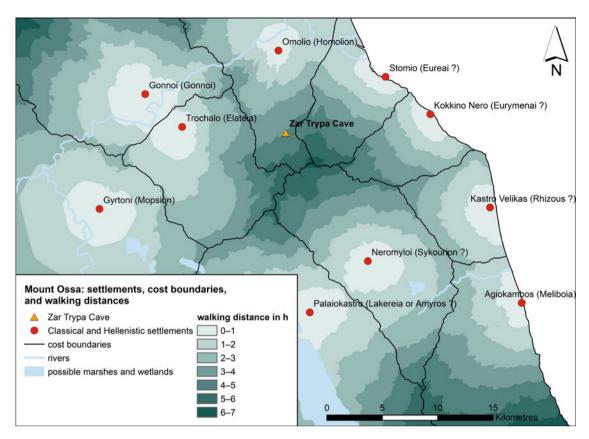


Fig. 15. The urban centres of Mount Ossa: cost boundaries and walking distances.

light.<sup>75</sup> If worshippers like Leon, the son of Antigonos, Enpedokleia, the daughter of Philodamos, and Mikra, the daughter of Damosthenes, accompanied their dedications to the Zar Trypa cave, their total journey time from the foothills to the cave and back would be considerably longer, possibly as much as 12 to 18 hours.<sup>76</sup>

These estimates – though very tentative – suggest that any participation in religious activities at the Zar Trypa cave was a considerable undertaking. Depending on the time of year, the daylight hours in north-eastern Thessaly vary between 9:21 h in late December and 14:58 h in June, with an additional hour of civil twilight.<sup>77</sup> In consequence, a journey to and from the Zar Trypa cave would have been possible within daylight hours during some months, but not others, especially if any additional time was spent at the Zar Trypa cave or at stops along the journey (Table 1). For many visitors, setting out to the cave before daybreak or staying overnight along the route would have played a significant role in their overall experience of taking part in religious activities at the site.

 $<sup>^{75}</sup>$  Bevan 2013, 6, who also provides a similar estimate (2.3–3 km/h) for a human porter carrying a load of 30–60 kg.

As the animal would only carry the monument for half of the journey, the travel time was estimated at 1.5 times the journey without a pack-animal. Testimonies that could shed light on the practicalities of setting up private votive stelai are rare. Since the stelai found at the Zar Trypa cave were worked with roots, their installation in rock-cut sockets or stone bases may have required the involvement of specialised craftsmen, but it is unclear if the dedicants themselves would have been present at the cave at the same time. Previous scholars have drawn on the inscription IG I[3].386.165–7 (408/7 BC) as evidence for the role of specialised craftsmen in the setting up ( $\dot{\epsilon}$ [ $\dot{\lambda}$ ( $\dot{\alpha}$ 0] $\alpha$ VTI) of stelai (e.g. Berti 2013, 22; Hochscheid 2020, 218), but according to the more recent edition IEleusis 52.A.III.44–46, the inscription may instead refer to the painting of a stele in encaustic technique ( $\dot{\epsilon}$ [ $\gamma$  $\kappa\dot{\epsilon}$ ] $\alpha$ VTI).

These calculations are based on the modern daylight hours at Larisa (available online <a href="https://sunsetsunrisetime.com/sun/larissa">https://sunsetsunrisetime.com/sun/larissa</a> accessed May 2021).

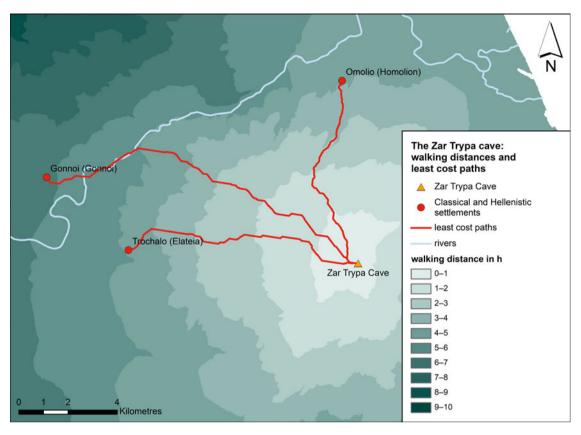


Fig. 16. The Zar Trypa cave: walking distances and least cost paths.

Table 1. A comparison of the total estimated travel times (between the Zar Trypa cave and three ancient settlements) and the daylight hours at four different times of the year.

	Total travel times		Travel possible during daylight (on foot / with pack-animals)?			
	on foot	with pack- animals	winter solstice: 9:21 h daylight (10:21 h with civil twilight)	vernal equinox: 12:05 h daylight (12:57 h with civil twilight)	summer solstice: 14:58 h daylight (16:02 h with civil twilight)	autumnal equinox: 12:13 h daylight (13:05 h with civil twilight)
Elateia Gonnoi Homolion	9:52 h 12:24 h 8:08 h	14:50 h 18:38 h 12:14 h	yes/no no/no yes/no	yes/no no/no yes/yes	yes/yes yes/no yes/yes	yes/no no/no yes/yes

Besides the mere time and effort required to reach a certain destination,<sup>78</sup> the ancient visitors' experience of travelling to and from a sacred site undoubtedly also encompassed many additional factors. In the case of the Zar Trypa cave, some experiences are impossible to reconstruct. For example, it is unclear whether visits to the cave were connected to certain points in the year or in an individual's life-cycle, if visitors travelled alone or in groups, or whether religious activities were performed en route as well as at the destination. But nevertheless – just as within the semi-

Although it is difficult to judge how the 'effort' of walking to the Zar Trypa cave would have compared to the everyday activities of the cave's visitors in antiquity, it is worth noting that Björnståhl (1783, 211) stressed the challenging, dangerous and exhausting nature of travelling on Mount Ossa's upper slopes.



Fig. 17. Mount Ossa from the west. This image, taken in March 2019, demonstrates the difference in seasonal vegetation patterns between the summit, the slopes and the plain.

micro level of the cave site – it is possible to 'flesh out' the visitors' macro-level experience by placing their movements to and from the cave within the wider physical landscape of Mount Ossa.

Regardless of the specific time of visit and route, every traveller setting out from one of the nearby major settlements towards the Zar Trypa cave moved through a succession of different environments, ever more unlike the familiar plain and foothills as the altitude increases. This effect is emphasised by the temperature – on average c. 5 °C cooler at the Zar Trypa cave than at Gonnoi on the plain below<sup>79</sup> – and particular weather phenomena, for example the high clouds that often shroud the upper parts of Mount Ossa during the later summer and early autumn. Similarly, vegetation patterns are very different in various altitude zones, especially during the spring, when the seasons are more advanced on the plain than on the upper slopes (Fig. 17). Although it would be wrong to view upper Mount Ossa as an 'empty' or

This figure is taken from the WorldClim version 2.1 climate data (available online <www.worldclim.org/data/worldclim21.html> accessed May 2021), which is based on observations between AD 1970 and 2000. For the WorldClim version 2.1 climate data, see Fick and Hijmans 2017. The individual monthly temperature averages at the Zar Trypa cave and at Gonnoi differ by 3.2–6.3 °C, with the most marked differences in April, May and June. A 3rd-century BC literary reference to the sanctuary of Zeus Aktaios (probably Zeus Akraios) and the Cave of Chiron on nearby Mount Pelion may provide an interesting parallel for the role of changing temperatures in 'religious experience'. According to Herakleides, a group of distinguished citizens was selected each summer to visit the sanctuary, clad in thick new fleeces due to the cold on the mountain (FGrHist II, fr. 60.8, p. 262 = Brill's New Jacoby [henceforth BNJ] 369A F 2). For a discussion of this passage, see for example Mili 2015, 203; Wiznura and Williamson 2020, 91–2; Buxton 1992, 10–11; and Aston 2006, 355–7; 2009, 86, who suggest that the wearing of new fleeces was of symbolic rather than of practical significance.

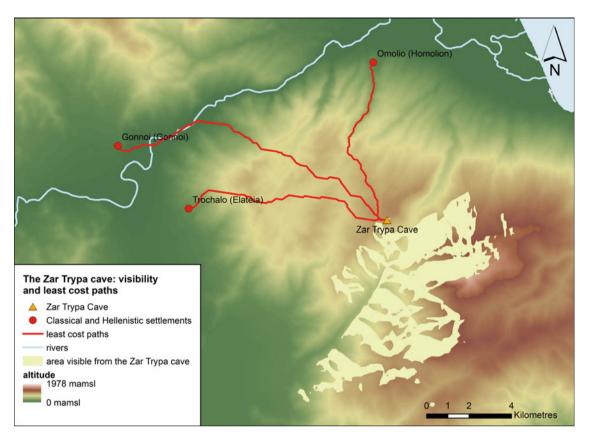


Fig. 18. The Zar Trypa cave: viewsheds and least cost paths.

'unproductive' landscape, <sup>80</sup> travel from the plain to the Zar Trypa cave thus required the visitor to move through an increasingly unfamiliar landscape, from the world of the plain to the world of the ὄρος. <sup>81</sup> Perhaps it is partly this journey that resonates in the address of the Nymphs as 'Oreiads' or 'Mountain Nymphs'.

A further factor that must have contributed to the experience of visiting the Zar Trypa cave is the site's visibility, or rather the site's invisibility. The cave's entrance is completely hidden by nearby rocks and is difficult to find without local knowledge. Even if the cave's entrance was clearly marked in antiquity by an ephemeral man-made or natural feature, this would not significantly increase the site's visibility. As a GIS-viewshed analysis demonstrates, the area from which the cave's location can be seen is comparatively limited, and especially visitors approaching from the west and north-west would not be able to catch a glimpse of the site from a distance of more than a few metres beyond the cave's entrance (Fig. 18). The main summit of Mount Ossa – a clear landmark when moving towards the Zar Trypa cave – would also be hidden from view for some of the ascent (Fig. 19), and it is only at the Zar Trypa ridge that both Mount Ossa and Mount Olympus come fully into view.

<sup>&</sup>lt;sup>80</sup> Instead of distinguishing agriculturally 'productive' and 'unproductive' zones, it is more useful to think of the mountainous landscapes of Classical and Hellenistic Greece as a patchwork of qualitatively different 'niches' that could be exploited through specific resource management strategies, including (but not limited to) various forms of arable cultivation, arboriculture and pastoralism. For a previous study of 'resource packages' in a Greek mountain environment, see for example Nixon and Moody 2017; for a brief discussion of the resources of modern Mount Ossa, see above.

<sup>&</sup>lt;sup>81</sup> For a range of common associations with the term ὄρος, see above.

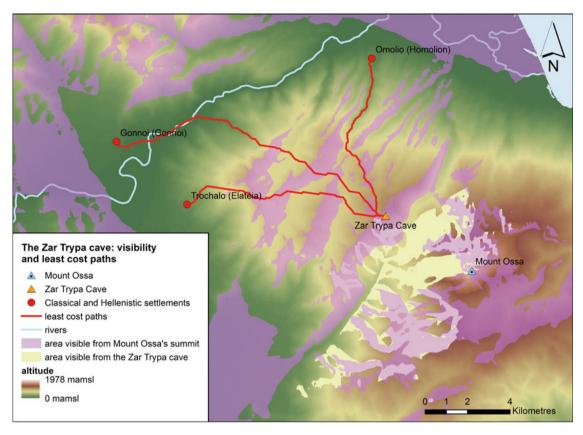


Fig. 19. The Zar Trypa cave and the summit of Mount Ossa: viewsheds and least cost paths.

The experience of walking to the Zar Trypa cave is thus very different from a journey to a mountaintop sanctuary.<sup>82</sup> While the latter usually enjoys a high visibility and visually dominates the surrounding countryside, Mount Ossa's cave-sanctuary is practically invisible to the approaching visitor. Participating in religious activities at the site thus not only required considerable time and effort, but also access to local topographical knowledge and an undeniable amount of trust – not least in a human guide's power to find and recognise a suitable path across the unfamiliar mountainside.

# CONCLUSION: 'SACRED TRAVEL' AS 'ECONOMIC INVESTMENT'

Examining the Zar Trypa cave within the natural environment of Mount Ossa reveals – in surprising detail – some aspects of the Classical or Hellenistic visitor's religious experience. Both within the semi-micro level of the cave and the macro level of the wider landscape, visits may have been strongly shaped by movement from the familiar to the unfamiliar, culminating in a naturally enhanced experience of the religious activities that took place within the sacred space

On the visual impact of and the travel to ancient mountaintop sanctuaries, see for example Nixon 2009; Collar 2020, 40–I; Susmann 2020; 2021; Wiznura and Williamson 2020. The abovementioned fragment of Herakleides, describing how a group of distinguished citizens was selected each summer in the presence of a priest to visit the sanctuary of Zeus Aktaios (probably Zeus Akraios) and the Cave of Chiron on Mount Pelion (FGrHist II, fr. 60.8, p. 262 = BNJ 369A F 2), provides an interesting Thessalian example of a procession to a mountaintop sanctuary. Judging, however, by Herakleides' description, this procession may have been a civic rite, contrasting with the strongly personal character of the cult of the Nymphs at Zar Trypa.

itself. This experience was made possible and 'framed' by the considerable time and effort expended in reaching the cave and in returning to the visitors' ordinary area of life after the completion of their religious activities. What is, however, more difficult to evaluate is the importance which individual participants attached to the journey to and from the cave, i.e. whether travel was merely necessary to reach the sacred space or whether the journey itself formed part of the religious activity. In other words, was the long and presumably tiring walk to the Zar Trypa cave seen as a form of devotion?

This question is not unique to the Zar Trypa cave and is firmly embedded in the broader scholarly debate of whether the concept of 'pilgrimage' provides an appropriate framework for the description and analysis of religiously motivated travel in pre-Christian antiquity.<sup>83</sup> While much in this debate hinges on the precise definition of the term 'pilgrimage', many scholars have highlighted that several features intrinsic to modern 'pilgrimages' are not an integral part of Classical or Hellenistic sacred travel. In particular, 'sacred travel' in antiquity was not necessarily a personal spiritual as well as a literal physical journey (Scullion 2005, 121–3; Collar and Kristensen 2020, 13), while suffering – an important feature of many contemporary pilgrimage practices – was not considered essential for the validity of a pre-Christian sacred journey (Collar 2020, 39).

In the absence of written testimonies, the issue of whether the travel to the Zar Trypa cave was merely a means of accessing the sacred space or was in itself a religious activity is impossible to resolve. However, one useful way of reframing the question is to consider the economic dimension of 'sacred travel'. The GIS-based analysis of the Zar Trypa cave's topographical context has clearly demonstrated the considerable commitment of time that was required to reach the site – time that could otherwise have been spent on economically productive activities. Walking to the Zar Trypa cave thus had real economic implications, which are quantifiable by assessing the duration of the 'sacred journey'. By participating in the cult at the site, visitors chose to 'invest' at least one day's worth of labour in a religious activity.

In consequence, any dedication made at the Zar Trypa cave represents not only a religious investment equal to the value of the dedicated object, but also the additional investment of time required to reach the sacred space. In some cases, the economic investment of the journey may well outstrip the economic value of the 'humble' dedication itself. Walking to the Zar Trypa cave – whether perceived as a religious activity or not – thus enhanced the value of the gifts made to the Nymphs.

This conclusion demonstrates the importance and potential of viewing Greek sacred sites – especially those without detailed excavation records – within the context of their surrounding natural and human landscape. By combining archival studies and landscape archaeology, the scanty archaeological remains at the Zar Trypa cave become a useful case study in how a focus on the ancient visitors' experiences can offer an avenue towards a better understanding of Classical and Hellenistic religious activities. Through its remote location, the cave provides a clear demonstration of the 'invisible' economic investment inherent in the archaeological traces of ritual activities. Irrespective of whether the participants in these activities saw the journey to the Zar Trypa cave as a form of devotion, their commitment in time and effort had become an intrinsic part of their gifts to the Nymphs. And perhaps it is worth remembering that several of

<sup>&</sup>lt;sup>83</sup> For this debate, see for example Elsner and Rutherford 2005, I-9; Rutherford 2013, I2-I4; Elsner 2017; Bremmer 2017; Friese and Kristensen 2017, 2-4.

For walking in sacred travel as an 'economic sacrifice', see for example Collar 2020, 34; for a broader discussion of the role of 'energy expenditure' in Greek religion, see Naerebout 2004. In this context, it is interesting to note that the testimonies referring to two of the best-known nympholepts of Classical antiquity – the abovementioned Pantalkes and the Theran Archedamos at the Vari cave in Attica – stress the importance of physical labour in the service of the Nymphs. In the case of Pantalkes, the 4th- or 3rd-century BC inscription highlights that he 'toiled with his own hands' (ἐξεπονήσατο χερσσίν; SEG 1.248, l. 11; I. Vallée Enipeus 73, l. 11), while Archedamos depicted himself holding stone-working tools (see for example Weller 1903, 271–3).

<sup>&</sup>lt;sup>85</sup> In addition to this 'economic' connection between the dedicated object and the journey, the act of placing an object at the cave may have invoked a recollection of the dedicant's journey together with the object. This idea was, for example, explored by Volioti (2011, 274–5) in her study of the Korykian Cave at Delphi.

the inscribed stelai at the cave were dedicated in fulfilment of a vow: would it be fanciful to imagine that the vows made by the likes of Leon, the son of Antigonos, and Mikra, the daughter of Damosthenes, not only encompassed the dedications themselves, but also the personal journey from Mount Ossa's foothills to the mysterious space of the Zar Trypa cave?

#### **ACKNOWLEDGEMENTS**

This article would not have been possible without the help, support, and relevant permits of the Ephorate of Antiquities of Larisa and the Ephorate of Palaeoanthropology and Speleology, to whom I express my gratitude. I would especially like to thank Dr Stavroula Sdrolia and Dr Giorgos Toufexis for their support, and Mrs Stella Katakouta for the permission to study and photograph the surviving stele from the cave in the storerooms of the Archaeological Museum of Larisa. Furthermore, I would like to thank to Elizabeth Ennion-Smith for her help in consulting the notebooks of A.J.B. Wace at Pembroke College, Cambridge, and the Master and Fellows of the college for the permission to consult and publish sketches from this material. I am also very much indebted to the anonymous reviewers for their helpful and constructive comments and to Prof. Maria Stamatopoulou for her support throughout my research, in particular for her help in attempting to trace any surviving finds from A.S. Arvanitopoulos' excavation. In addition, I would like to thank New College, Oxford, for providing an ideal academic framework for my research, as well as the Thomas Whitcombe Greene Fund (Faculty of Classics, Oxford), the Meyerstein Bequest (School of Archaeology, Oxford) and the Ludwig Humanities Research Fund (New College, Oxford) for supporting my travel and fieldwork in Thessaly. Unless otherwise stated, all site photographs, landscape photographs and maps in this article are by the author.

anna.blomley@classics.ox.ac.uk

# REFERENCES

# Unpublished sources

GBR/1058/WAC/1/5: Wace, A.J.B. 1910. Miscellanea Macedonica, Thessalica, or an account of the prehistoric inhabitants of ancient Macedon and Thessaly and other matters appertaining to these regions. August 1909. January, February 1910 (unpublished notebook, today in the Library of Pembroke College, Cambridge).

#### Published sources

- Adams, C.E.P. 2007. Land Transport in Roman Egypt. A Study of Economics and Administration in a Roman Province (Oxford Classical Monographs; Oxford).
- Albrecht, J., Degelmann, C., Gasparini, V., Gordon, R., Patzelt, M., Petridou, G., Raja, R., Rieger, A.-K., Rüpke, J., Sippel, B., Urciuoli, E.R. and Weiss, L. 2018. 'Religion in the making: the Lived Ancient Religion approach', Religion 48, 568-93.
- Arvanitopoulos, A.S. 1910a. "Άνασκαφαὶ καὶ ἔρευναι έν Θεσσαλία κατὰ τὸ ἔτος 1910", Prakt 168-264. Arvanitopoulos, A.S. 1910b. "Θεσσαλικαὶ ἐπιγραφαί",
- ArchEph 331-82.
- Arvanitopoulos, A.S. 1911. "Άνασκαφαὶ καὶ ἔρευναι ἐν Θεσσαλία κατά τὸ ἔτος 1911", Prakt 280-356.
- Aston, E. 2006. 'The absence of Chiron', CQ 56, 349-62.

- Aston, E. 2009. 'Thetis and Cheiron in Thessaly', Kernos 22, 83-107.
- Avramea, A. 1974. "Η βυζαντινή Θεσσαλία μέχρι του 1204: συμβολή εις την ιστορικήν γεωγραίαν" (unpublished PhD dissertation, National and Kapodistrian University of Athens).
- Baker, P. 2001. 'Quelques remarques sur les institutions militaires dans les cités de Thessalie à l'époque Hellénistique', AncW 32, 191–206.
- Berti, I. 2013. 'Quanto costa incidere una stele? Costi di produzione e meccanismi di pubblicazione delle iscrizioni pubbliche in Grecia', Historikά 3, 11-46.
- Bevan, A.H. 2013. 'Travel and interaction in the Greek and Roman world: a review of some computational modelling approaches', in S.E. Dunn and S. Mahony (eds), The Digital Classicist 2013 (Bulletin of the Institute of Classical Studies Supp. Vol. 122; London), 3–24.
- Bishop, K.G. 2021. 'The "shep-herd" relationship in Classical and Hellenistic Thessaly, Greece: investigating husbandry practices using carbon, oxygen, and strontium isotopes from sheep and goat tooth enamel' (unpublished DPhil thesis, University of Alberta).
- Bishop, K.G., Garvie-Lok, S., Haagsma, MacKinnon, M. and Karapanou, S. 2020. 'Mobile animal management in the Mediterranean:

- investigating Hellenistic (323–31 BCE) husbandry practices in Thessaly, Greece using  $\delta$ 13C,  $\delta$ 18O, and 87Sr/86Sr recorded from sheep and goat tooth enamel', *JAS: Reports* 31, no. 102331.
- Bjerk, H.B. 2012. 'On the outer fringe of the human world: phenomenological perspectives on anthropomorphic cave paintings in Norway', in K.A. Bergsvik and R. Skeates (eds), *Caves in Context: The Cultural Significance of Caves and Rockshelters in Europe* (Oxford), 48–64.
- Björnståhl, J.J. 1783. Briefe auf seinen ausländischen Reisen an den königlichen Bibliothekar C.C. Gjörwell in Stockholm (Rostock).
- Bouchon, R. 2014. 'Démophilos de Doliché, Paul-Émile et les conséquences de la troisième guerre de Macédoine à Gonnoi', *Topoi* 19, 483–513.
- Bouchon, R. and Helly, B. 2016. 'Du nouveau sur Élateia-Élétieiai-Iletiae et la localisation de Gyrton', *Studi Ellenistici* 30, 103–38.
- Bremmer, J.N. 2017. 'Pilgrimage progress?', in T.M. Kristensen and W. Friese (eds), Excavating Pilgrimage: Archaeological Approaches to Sacred Travel and Movement in the Ancient World (Routledge Studies in Pilgrimage, Religious Travel and Tourism; London), 275–84.
- Buxton, R. 1992. 'Imaginary Greek mountains', JHS 112, 1-15.
- Clarke, D.L. 1977. 'Spatial information in archaeology', in D.L. Clarke (ed.), *Spatial Archaeology* (London), 1–32.
- Collar, A. 2020. 'Movement, labour and devotion: a virtual walk to the sanctuary at Mount Kasios', in A. Collar and T.M. Kristensen (eds), *Pilgrimage and Economy in the Ancient Mediterranean* (Religions in the Graeco-Roman World Vol. 192; Leiden), 33–61.
- Collar, A. and Kristensen, T.M. 2020. 'Embedded economies of ancient Mediterranean pilgrimage', in A. Collar and T.M. Kristensen (eds), *Pilgrimage and Economy in the Ancient Mediterranean* (Religions in the Graeco-Roman World Vol. 192; Leiden), 1–30.
- Connelly, J.B. 2011. 'Ritual movement through Greek sacred space: towards an archaeology of performance', in A. Chaniotis (ed.), Ritual Dynamics in the Ancient Mediterranean: Agency, Emotion, Gender, Reception (Heidelberger althistorische Beiträge und epigraphische Studien Vol. 49; Stuttgart), 313–46.

  Connor, W.R. 1988. 'Seized by the nymphs:
- Connor, W.R. 1988. 'Seized by the nymphs: mympholepsy and symbolic expression in Classical Greece', *ClAnt* 7, 155–89.
- Coste-Messelière, P. de la and Daux, G. 1924. 'De Malide en Thessalie', BCH 48, 343–76.
- Cotterell, B. 1990. Mechanics of Pre-Industrial Technology: An Introduction to the Mechanics of Ancient and Traditional Material Culture (Cambridge).
- Decourt, J.-C. and Mottas, F. 1997. 'Voies et milliaires romains de Thessalie', *BCH* 121, 311–54.
- Dillon, M. 1997. Pilgrims and Pilgrimage in Ancient Greece (London).
- Dowd, M. 2015. The Archaeology of Caves in Ireland (Oxford).
- Dowd, M. 2019. 'Darkness and light in the archaeological past', in R. Skeates and J. Day (eds), *The Routledge Handbook of Sensory Archaeology* (London), 193–209.

- Elsner, J. 2017. 'Excavating pilgrimage', in W. Friese and T.M. Kristensen (eds), Excavating Pilgrimage: Archaeological Approaches to Sacred Travel and Movement in the Ancient World (Routledge Studies in Pilgrimage, Religious Travel and Tourism; London), 265–74.
- Elsner, J. and Rutherford, I. 2005. 'Introduction', in J. Elsner and I. Rutherford (eds), *Pilgrimage in Graeco-Roman and Early Christian Antiquity: Seeing the Gods* (Oxford), 1–40.
- Fachard, S. 2017. 'Modelling the territories of Attic demes. A computational approach', in J.L. Bintliff and N.K. Rutter (eds), *The Archaeology of Greece and Rome. Studies in Honour of Anthony Snodgrass* (Edinburgh), 192–222.
- Fachard, S. and Knodell, A.R. 2020. 'Out of Attica. Modeling mobility in the Mycenaean period', in N. Papadimitriou, J.C. Wright, S. Fachard, N. Polychronakou-Sgouritsa and E. Andrikou (eds), Athens and Attica in Prehistory. Proceedings of the International Conference, Athens, 27–31 May 2015 (Oxford), 407–16.
- Fachard, S. and Pirisino, D. 2015. 'Routes out of Attica', in M.M. Miles (ed.), Autopsy in Athens: Recent Archaeological Research on Athens and Attica (Oxford), 139–53.
- Fick, S.E. and Hijmans, R.J. 2017. 'WorldClim 2. New 1-km spatial resolution climate surfaces for global land areas', *International Journal of Climatology* 37, 4302–15.
- Filioglou, D., Prummel, W. and Çakirlar, C. 2021. 'Animal husbandry in Classical and Hellenistic Thessaly (Central Greece): a zooarchaeological perspective from Almiros', JAS: Reports 39, no. 103164.
- Forbes, H. 1996. 'The uses of the uncultivated landscape in modern Greece: a pointer to the value of wilderness in antiquity', in G. Shipley and J.B. Salmon (eds), *Human Landscapes in Classical Antiquity: Environment and Culture* (Leicester–Nottingham Studies in Ancient Society Vol. 6; London), 68–97.
- Friese, W. and Kristensen, T.M. 2017. 'Introduction: archaeologies of pilgrimage', in T.M. Kristensen and W. Friese (eds), Excavating Pilgrimage: Archaeological Approaches to Sacred Travel and Movement in the Ancient World (Routledge Studies in Pilgrimage, Religious Travel and Tourism; London), 1–10.
- Gallis, K. and Tziafalias, A. 1974. "Αρχαιότητες και μήμεια κεντρικής-δυτικής Θεσσαλίας: 1973", ArchDelt 29 (Β' 2), 560-84.
- Gast, R., German, K. and Eilert, E. 1979.

  'Petrographische und geochemische
  Untersuchungen zur Herkunftsbestimming von
  Marmoren Hellenistischer Grabstelen
  Thessaliens', in B. Helly (ed.), La Thessalie: Actes
  de La Table-Ronde 21–24 Juillet 1975: Lyon (Paris),
  51–62.
- Heinz, M. 1998. 'Thessalische Votivstelen: Epigraphische Auswertung, Typologie der Stelenformen, Ikonographie der Reliefs' (unpublished PhD dissertation, Ruhr-Universität Bochum).
- Helly, B. 1973. Gonnoi (Amsterdam).
- Helly, B. 1988. 'Thessalie', RÉpigr 101, 411-27.
- Helly, B. 2004. 'Sur quelques monnaies des cités
   Magnètes: Euréai, Euryménai, Méliboia, Rhizous',
   in L. Kypraiou (ed.), Πρακτικά συνεδρίου της Γ'

- επιστημονικής συνάντησης "Το νόμισμα στο Θεσσαλικό χώρο: νομισματοκοπεία, κυκλοφορία, εικονογραφία, ιστορία: αρχαίοι βυζαντινο νεώτεροι χρόνοι" (Οβολός Vol. 7; Athens), 101–24.
- Helly, B. 2007. 'La Capitale de la Thessalie face aux dangers de la troisième guerre de Macédoine: l'année 171 av. J.-C. à Larisa', *Topoi* 15, 127–24.
- Helly, B. 2013. Géographie et histoire des Magnètes de Thessalie (Vareilles).
- Herzog, I. 2013. 'Theory and practice of cost functions', in F.J. Melero, P. Cano and J. Revelles (eds), Fusion of Cultures: Proceeding of the 38th Conference on Computer Applications and Quantitative Methods in Archaeology: Granada, Spain, April 2010 (BAR-IS 2494; Oxford), 375–82.
- Herzog, I. 2014. 'A review of case studies in archaeological least-cost analysis', *Archeologia e Calcolatori* 25, 223–39.
- Higgins, M.D. and Higgins, R.A. 1996. A Geological Companion to Greece and the Aegean (London).
- Hild, F., Koder, J., Spanos, K. and Agraphiotis, D. 1987. "Βυζαντινή Θεσσαλία, οικισμοί, τοπωνύμια, μοναστήρια, ναοί", Θεσσαλικό Ημερολόγιο 12, 12–127.
- Hochscheid, H. 2020. 'Professionalism in Archaic and Classical sculpture in Athens: the price of technē', in E. Stewart, E. Harris and D. Lewis (eds), Skilled Labour and Professionalism in Ancient Greece and Rome (Cambridge), 205–29.
- Jim, T.S.F. 2014. 'On Greek dedicatory practices: the problem of hyper', *GRBS* 54, 617–38.
- Kantner, J. 2012. 'Realism, reality, and routes: evaluating cost-surface and cost-path algorithms', in D.A. White and S.L. Surface-Evans (eds), Least Cost Analysis of Social Landscapes: Archaeological Case Studies (Salt Lake City, UT), 225–38.
- Karagiorgou, O. 2001. 'Urbanism and economy in Late Antique Thessaly (3rd-7th century AD): the archaeological evidence' (unpublished DPhil thesis, University of Oxford).
- Κiel, Μ. 2002. "Επίσημες τουρκικές πήγες για τη μοναστηριακή ζωή και τα μοναστήρια της ανατολικές Θεσσαλίας κατά τον 16ο αιώνα το κοινωνικό και οικονομικό υπόβαθρο", in D. Agrafiotis (ed.), Αγιά: ιστορικά αρχαιολογικά: πρακτικά του Α΄ ιστορικού-αρχαιολογικού συνεδρίου για την Αγιά και την επαρχία της (3-4/4/1993) (Agia Larisas), 225-76.
- Knodell, A.R. 2013. 'Small-world networks and Mediterranean dynamics in the Euboean Gulf. An archaeology of complexity in Late Bronze Age and Early Iron Age Greece' (unpublished PhD thesis, Brown University).
- Knodell, A.R. 2017. 'A conduit between two worlds. Geography and connectivity in the Euboean Gulf', in Ž. Tankosić, F. Mavridis and M. Kosma (eds), An Island between Two Worlds. The Archaeology of Euboea from Prehistoric to Byzantine Times (Athens), 195–213.
- Koder, J. and Hild, F. 1976. *Hellas und Thessalien* (Tabula Imperii Byzantini Vol. 1; Vienna).
- Kokkorou-Alevra, G., Poupaki, E., Eustathopoulos, A. and Chatzikonstantinou, A. 2014. *Corpus αρχαίων λατομείων: λατομεία του ελλαδικού χώρου από τους προϊστορικούς έως τους μεσαιωνικούς χρόνους* (Athens).
- Kontogiannis, A. 2009. Ονομάτων Επίσκεψις: LGPN III b: Delenda et Corrigenda (Volos).

- Kravaritou, S. 2018. 'Cults and rites of passage in ancient Thessaly', in M. Kalaitzi, P. Paschidis, C. Antonetti and A.M. Guimier-Sorbets (eds), Βορειοελλαδικά: Tales from the Lands of the Ethne: Essays in Honour of Miltiades B. Hatzopoulos (Athens), 377–95.
- Kravaritou, S. and Stamatopoulou, M. 2018. 'From Alcestis to Archidike: Thessalian attitudes to death and the afterlife', in G. Ekroth and I. Nielsen (eds), Round Trip to Hades in the Eastern Mediterranean Tradition: Visits to the Underworld from Antiquity to Byzantion (Cultural Interactions in the Mediterranean Vol. 2; Leiden), 124–62.
- Kristensen, T.M. 2019. 'New approaches to movement in Athenian religion', in W. Friese, S. Handberg and T.M. Kristensen (eds), Ascending and Descending the Acropolis: Movement in Athenian Religion (Monographs of the Danish Institute at Athens Vol. 23; Aarhus), 11–22.
- Laferrière, C.M. 2019. 'Sacred sounds: the cult of Pan and the Nymphs in the Vari cave', *ClAnt* 38, 185–216.
- Langdon, M.K. 2000. 'Mountains in Greek religion', *CW* 93, 461–70.
- Larson, J. 2001. Greek Nymphs: Myth, Cult, Lore (Oxford).
- Larson, J. 2007. 'A land full of gods: natural deities in Greek religion', in D. Ogden (ed.), A Companion to Greek Religion (Blackwell Companions to the Ancient World; Malden, MA), 56–70.
- Leonardos, I.A. 1836. Νεωτάτη τῆς Θεσσαλίας χωρογραφία, συνταχθεῖσαι κατ' ἰδιαιτέραν τινα μέθοδον γεωγραφικῶς καί περιηγητικῶς (Budapest).
- Ludwig, B. 2020. 'Reconstructing the ancient route network in Pergamon's surroundings', *Land* 9.8, no. 241.
- Luginbühl, T. 2015. 'Ritual activities, processions and pilgrimages', in R. Raja and J. Rüpke (eds), Companion to the Archaeology of Religion in the Ancient World (Blackwell Companions to the Ancient World; Chichester), 41–59.
- McDevitt, A.S. 1970. Inscriptions from Thessaly: An Analytical Handlist and Bibliography (Hildesheim).
- McGuire, M.B. 2008. Lived Religion: Faith and Practice in Everyday Life (Oxford).
- McHugh, M. 2017. 'A GIS exploratory analysis of farmsteads: a case-study of the Karystian farmsteads on the Paximadi Peninsula', in Ž. Tankosić, F. Mavridis and M. Kosma (eds), An Island between Two Worlds: The Archaeology of Euboea from Prehistoric to Byzantine Times (Papers and Monographs from the Norwegian Institute at Athens Vol. 6; Athens), 461–8.
- McHugh, M. 2019. 'Going the extra mile: travel, time and distance in Classical Attica', *BSA* 114, 207–40.
- Márquez-Pérez, J., Vallejo-Villalta, I. and Álvarez-Francoso, J.I. 2017. 'Estimated travel time for walking trails in natural areas', *Geografisk Tidsskrift* 117, 53–62.
- Matsouka, P., Adamakopoulos, T., Garvaris, V., Machmoudies, G., Roussos, G., Kalyvas, M. and Ashmore, M. 2007. Χάρτης Κισσάβου, 1:50,000 (Τορο 50; Athens).
- Melfos, V. 2004. 'Mineralogical and stable isotopic study of ancient white marble quarries in Larisa, Thessaly, Greece', *Bulletin of the Geological Society of Greece* 36, 1164–72.

- Melfos, V., Vavelidis, M. and Theodorikas, S. 2002. 'Preservation of the Greek cultural heritage: a study of the geology and extraction techniques of two ancient quarries, Larisa prefecture, Thessaly, Greece', in A.G. Kungolos, A.B. Liakopoulos, G.P. Korfiatis, A.D. Koutsospyros, K.L. Katsifarakis and A.C. Demetracopoulos (eds), *Proceedings of the International Conference 'Protection and Restoration of the Environment VI'* (Skiathos), 1535–44.
- Melfos, V., Voudouris, P., Papadopoulou, L., Sdrolia, S. and Helly, B. 2010. 'Mineralogical, petrographic and stable isotopic study of ancient white marble quarries in Thessaly, Greece II: Chasanbali, Tempi, Atrax, Tisaion mountain', Bulletin of the Geological Society of Greece 43, 845–55.
- Mili, M. 2011. 'The Thessalian Ainians or the Ainians of Thessaly? Dedications and games of identity in Roman Thessaly', *ZPE* 176, 169–76.
- Mili, M. 2015. Religion and Society in Ancient Thessaly (Oxford Classical Monographs; Oxford).
- Minetti, A.E., Moia, C., Roi, G.S., Susta, D. and Ferretti, G. 2002. 'Energy cost of walking and running at extreme uphill and downhill slopes', *Journal of Applied Physiology* 93.3, 1039–46.
- Mitchell, P. 2018. The Donkey in Human History: An Archaeological Perspective (Oxford).
- Moustaka, A. 1983. Kulte und Mythen auf Thessalischen Münzen (Würzburg).
- Naerebout, F.G. 2004. 'Spending energy as an important part of ancient Greek religious behaviour', *Kodai* 13–14, 9–18.
- Nikonanos, Ν. 1973. Ερευνες στήν επαρχία Αγιάς Λαρίσης", Αρχείον Θεσσαλικών Μελετών 2, 39–60.
- Nikonanos, N. 1997. Βυζαντινοί νάοι της Θεσσαλίας: από τον 100 αιώνα ως την κατάκτηση της περιοχής από τους Τούρκους το 1393, 2nd edn (Athens).
- Nixon, L. 2009. 'Investigating Minoan sacred landscapes', in A.L. D'Agata and A. Van de Moortel (eds), Archaeologies of Cult: Essays on Ritual and Cult in Crete in Honor of Geraldine C. Gesell (Hesperia Supplement Vol. 42; Princeton, NJ), 269-75.
- Nixon, L. and Moody, J. 2017. 'Cultural landscapes and resources in Sphakia, SW Crete: a diachronic perspective', in D.W. Rupp and J.E. Tomlinson (eds), From Maple to Olive: Proceedings of a Colloquium to Celebrate the 40th Anniversary of the Canadian Institute in Greece. Athens, 10–11 June 2016 (Publications of the Canadian Institute in Greece Vol. 10; Athens), 485–504.
- Pache, C.O. 2011. A Moment's Ornament: The Poetics of Nympholepsy in Ancient Greece (Oxford).
- Papageorgakis, Ι. 1963. "Συμβολὴ εἰς τὴν γνώσιν τῶν εἰς τὴν ἀρχαίαν Ἑλλάδα χρησιμοποιηθέντων μαρμάρων καὶ τῶν λατομείων αὐτῶν Ι: τὰ ἀρχαῖα λατομεῖα τῆς Θεσσαλίας", PraktAkAth 38, 564-72.
- Papalexandrou, N. 2020. 'Caves as sites of sensory and cognitive enhancement: the Idaean Cave on Crete', in S. Katsarou and A. Nagel (eds), Cave and Worship in Ancient Greece: New Approaches to Landscape and Ritual (London), 49–69.
- Parker, R. and Stamatopoulou, M. 2004. 'A new funerary gold leaf from Ferai', *ArchEph* 1–32.
- Pikoulas, G.A. 2007. 'Travelling by land in ancient Greece', in C.E.P. Adams and J. Roy (eds), *Travel, Geography and Culture in Ancient Greece, Egypt and the Near East* (Leicester–Nottingham Studies in Ancient Society Vol. 10; London), 78–87.

- Pikoulas, G.A. 2016. "Η Άλεξάνδρου Κλῖμαξ", in M. Giannopoulou and Ch. Kallini (eds), ἡχάδιν ΙΙ: τιμητικός τόμος για τη Στέλλα Δρούγου (Athens), 337–46.
- Raepsaet, G. 2010. 'Land transport part 2: riding, harnesses, and vehicles', in J.P. Oleson (ed.), *The Oxford Handbook of Engineering and Technology in the Classical World* (Oxford), 580–605.
- Raja, R. and Rüpke, J. 2015. 'Archaeology of religion, material religion, and the ancient world', in R. Raja and J. Rüpke (eds), Companion to the Archaeology of Religion in the Ancient World (Blackwell Companions to the Ancient World; Chichester), 1–26.
- Rakatsakis, K. and Tziafalias, A. 2004. Λατρείες και ιερά στην αρχαία Θεσσαλία: Β' Περραιβία (Ioannina).
- Reinders, H.R. and Prummel, W. 1998. 'Transhumance in Hellenistic Thessaly', *Environmental Archaeology* 3, 81–95.
- Roth, J.P. 1999. *The Logistics of the Roman Army at War* (264 BC-AD 235) (Columbia Studies in the Classical Tradition Vol. 23; Leiden).
- Rutherford, I. 2013. State Pilgrims and Sacred Observers in Ancient Greece: A Study of Theōriā and Theōroi (Cambridge).
- Scriven, R. 2014. 'Geographies of pilgrimage: meaningful movements and embodied mobilities', *Geography Compass* 8.4, 249–61.
- Scullion, S. 2005. "Pilgrimage" and Greek religion: sacred and secular in the pagan polis', in J. Elsner and I. Rutherford (eds), *Pilgrimage in Graeco-Roman and Early Christian Antiquity: Seeing the Gods* (Oxford), 111–30.

  Sdrolia, S. 2006. "Η πορεία του Αλέξιου Κομνηνού το
- Sdrolia, S. 2006. "Η πορεία του Αλέξιου Κομνηνού το 1083 στη Θεσσαλία: τα νέα ευρήματα στον Κίσσαβο και το Μαυροβούνι", in A. Mazarakis Ainian (ed.), Πρακτικά επιστημονικής συνάντησης "10 Αρχαιολογικό Έργο Θεσσαλίας και Στερεάς Ελλάδας 2003, Βόλος 27.2–2.3.2003" (Volos), 403–19.
- Sdrolia, S. 2008. "Τέμπη: Οδικό έργο Μαλιακός Κλειδί, θέση Τσιριγά Χωράφια", *ArchDelt* 63 (Β΄ 1), 713–15.
- Sdrolia, S. 2012. "Παλαιοχριστιανικά ευρήματα στην περιοχή του Κισσάβου", in A. Mazarakis Ainian (ed.), Αρχαιολογικό έργο Θεσσαλίας και Στερεάς Ελλάδας: πρακτικά επιστημονικής συνάντησης Βόλος 12.3–15.3.2009 (Volos), 585–92.
- Seifried, R. 2017. 'Situating the Paximadi towers in the Classical and Roman landscapes', in Ž. Tankosić, F. Mavridis and M. Kosma (eds), An Island between Two Worlds: The Archaeology of Euboea from Prehistoric to Byzantine Times (Papers and Monographs from the Norwegian Institute at Athens Vol. 6; Athens), 431–40.
- Seifried, R. and Gardner, C.A.M. 2019. 'Reconstructing historical journeys with least-cost analysis: Colonel William Leake in the Mani Peninsula, Greece', JAS 24, 391–411.
- Siegesmund, S. and Dürrast, H. 2011. 'Physical and mechanical properties of rocks', in S. Siegesmund and R. Snethlage (eds), *Stone in Architecture:* Properties, Durability, 4th edn (Heidelberg), 97–226.
- Sivignon, M. 1975. La Thessalie: analyse géographique d'une province Grecque (Lyon).
- Skeates, R. 2016. 'Experiencing darkness and light in caves: late prehistoric examples from Seulo in

- central Sardinia', in M. Dowd (ed.), The Archaeology of Darkness (Oxford), 39-49.
- Sporn, K. 2007. 'Höhlenheiligtümer in Griechenland', in C. Frevel and H. von Hesberg (eds), Kult und Kommunikation: Medien in Heiligtümern der Antike (Schriften des Lehr- und Forschungszentrums für die antiken Kulturen des Mittelmeerraumes Vol. 4; Wiesbaden), 39–62.
- Sporn, K. 2010. 'Espace naturel et paysages religieux: les grottes dans le monde grec', RHR 4, 553-71.
- Sporn, K. 2013. 'Mapping Greek sacred caves: sources, features, cults', in F. Mavridis and J.T. Jensen (eds), Stable Places and Changing Perceptions. Cave Archaeology in Greece (BAR-IS 2558; Oxford), 202–16.
- Sporn, K. 2020. 'Man-made space versus natural space in Greek sacred caves', in A. Haug and A. Müller (eds), *Hellenistic Architecture and Human Action: A Case of Reciprocal Influence* (Scales of Transformation Vol. 10; Leiden), 161–81.
- Stählin, F. 1924. Das hellenische Thessalien: Landeskundliche und geschichtliche Beschreibung Thessaliens in der hellenischen und römischen Zeit (Stuttgart).
- Stamatopoulou, M. and Katakouta, S. 2020. "Η άγνωστη πόλη στη θέση "Γκρεμουρας" (ΑΡΓΙΣΣΑ): ανασύνθεση δεδομένων", in Αρχαιολογικό έργο Θεσσαλίας και Στερεάς Ελλάδας: πρακτικά επιστημονικής συνάντησης Βόλος 26.2–1.3.2012 (Volos), 383–94.
- Susmann, N.M. 2020. 'Regional ways of seeing: a bigdata approach for measuring ancient visualscapes', *Advances in Archaeological Practice* 8, 174–91.
- Susmann, N.M. 2021. 'Moving down the mountain: pathways for sacred landscape transformation at ancient Epidaurus and Nemea', *Time and Mind* 14, 73–109.
- Sythiakaki, V. 1999. "Αμπελάκια", ArchDelt 54 (Β΄ 1), 433. Theocharis, D.P. 1965. "Ομόλιον", ArchDelt 20 (Β΄ 2), 319. Theocharis, D.P. 1969a. "Θολωτοὶ μυκηναϊκοὶ τάφοι τῆς "Όσσης", AAA 2, 165–7.
- Theocharis, D.P. 1969b. "Άνασκαφὴ μυκηναϊκῶν θολωτῶν τάφων Σπηλιᾶς "Όσσης", *ArchDelt* 24 (Β΄ 2), 223.
- Theocharis, D.P. and Lazaridis, P. 1961. "Αρχαιότητες και μνήμεια Θεσσαλίας", *ArchDelt* 17 (B'), 170–82.
- Tozer, H.F. 1869. Researches in the Highlands of Turkey including Visits to Mounts Ida, Athos, Olympus, and Pelion, to the Mirdite Albanians, and Other Remote Tribes: With Notes on the Ballads Tales, and Classical Superstitions of the Modern Greeks (London).
- Tripcevich, N. 2009. 'Cost-Distance Analysis' (available online <a href="http://mapaspects.org/node/3744">http://mapaspects.org/node/3744</a> accessed October 2015).
- Tziafalias, A. 1981. "Σπηλιά", ArchDelt 36 (Β΄ 2), 259. Tziafalias, A. 1984. "Ανέκδοτες θεσσαλικές επιγραφές", Θεσσαλικό Ημερολόγιο 7, 193–236.

- Tziafalias, Α. 1995. "Αρχαίος Άτραξ: ιστορία, τοπογραφία, πολιτισμός", Τρικαλινά 15, 69–96.
- Tziafalias, A. 2000. "Ταύτιση του αρχαίου Μοψίου", in Πρακτικά 1ης επιστημονικής συνάντησης "Το Έργο των Εφορειών Αρχαιοτήτων και Νεωτέρων Μνημείων του ΥΠ.ΠΟ. στη Θεσσαλία και την ευρύτερη περιοχή της" (Volos), 97–101.
- Tziafalias, A. and Santin, E. 2013. 'Épigrammes signées de Thessalie', *Topoi* 18, 251–82.
- Ustinova, Y. 2009. Caves and the Ancient Greek Mind: Descending Underground in the Search for Ultimate Truth (Oxford).
- Ustinova, Y. 2018. Divine Mania: Alteration of Consciousness in Ancient Greece (London).
- Vigneron, P. 1968. Le Cheval dans l'antiquité grécoromaine: des guerres médiques aux grandes invasions, contribution à l'histoire des techniques (Nancy).
- Vitos, G.S. 2017. "Το αρχαίο Ομόλιο και τα νεκροταεία του", 2 vols (unpublished PhD dissertation, University of Thessaly). 1: "Κείμενο". 2: "Κατάλογοι ευρημάτων".
- Volioti, K. 2011. 'Travel tokens to the Korykian Cave near Delphi: perspectives from material and human mobility', *Pallas* 86, 263–85.
- Wace, A.J.B. and Thompson, M.S. 1909. 'A cave of the nymphs on Mount Ossa', *BSA* 15, 243–7.
- Wagman, R. 2016. The Cave of the Nymphs at Pharsalus: Studies on a Thessalian Country Shrine (Brill Studies in Greek and Roman Epigraphy Vol. 6; Leiden).
- Wagman, R. and Nichols, A.G. 2015. "Ένα λησμονημένο ιερό των νυμφών στη βορειοανατολική Θεσσαλία", Θεσσαλικό Ημερολόγιο 68, 85-92.
- Walsh, J.J. 2000. 'The disorders of the 170s BC and Roman intervention in the class struggle in Greece', CQ 50, 300–3.
- Weller, C.H. 1903. 'The cave at Vari I: description, account of excavation, and history', AJA 7, 263–88.
- Wescoat, B.D. 2017. 'The pilgrim's passage into the sanctuary of the Great Gods, Samothrace', in T.M. Kristensen and W. Friese (eds), Excavating Pilgrimage: Archaeological Approaches to Sacred Travel and Movement in the Ancient World (London), 67–86.
- White, D.A. 2015. 'The basics of least cost analysis for archaeological applications', Advances in Archaeological Practice 3, 407–14.
- Whitehouse, R.D. 2016. 'Between symbol and senses: the role of darkness in ritual in prehistoric Italy', in M. Dowd (ed.), *The Archaeology of Darkness* (Oxford), 25–37.
- Wilhelm, A. 1890. 'Inschriften aus Thessalien', AM 15, 283–317.
- Wiznura, A. and Williamson, C. 2020. 'Mountains of memory: triangulating landscape, cult and regional identity through Zeus', *Pharos* 24, 77–112.
- Zelnick-Abramovitz, R. 2013. Taxing Freedom in Thessalian Manumission Inscriptions (Leiden).

# Πηγαίνοντας να δουν τις νύμφες: τοπίο και θρησκευτική εμπειρία στο σπήλαιο Ζαρ Τρύπα (όρος Όσσα, Θεσσαλία)

Η παρούσα εργασία επικεντρώνεται στο ελάχιστα γνωστό αλλά σημαντικό σπήλαιο-ιερό Ζαρ Τρύπα στο όρος Όσσα (σημερινός Κίσσαβος) στη βορειοανατολική Θεσσαλία. Το 1910, η έρευνα που διεξήχθη στο χώρο αποκάλυψε κατάλοιπα αναθημάτων από την κλασική, ελληνιστική και ρωμαϊκή περίοδο, συμπεριλαμβανομένης μιας ομάδας οκτώ επιγραφών αφιερωμένων στις Νύμφες. Παρά αυτό το αξιοσημείωτο επιγραφικό σύνολο, η θέση δεν ερευνήθηκε πέραν της μίας ανασκαφικής περιόδου, και σήμερα είναι σε μεγάλο βαθμό άγνωστος. Κατά συνέπεια, το σπήλαιο Ζαρ Τρύπα και τα ευρήματά του δεν έχουν ποτέ αναδειχθεί στη συζήτηση για τη θεσσαλική θρησκεία ή για τα ελληνικά ιερά σε φυσικό περιβάλλον (nature sanctuaries). Συνδυάζοντας αρχειακές μελέτες, επιτόπιες παρατηρήσεις και μεθόδους αρχαιολογίας του τοπίου με βάση τα GIS, η παρούσα εργασία έχει ως στόχο να επανεκτιμήσει τα σωζόμενα αρχαιολογικά δεδομένα από το σπήλαιο Ζαρ Τρύπα, να εξετάσει το χώρο τέλεσης της τελετουργικής δραστηριότητας και να τοποθετήσει το σπήλαιο στο πλαίσιο του φυσικού περιβάλλοντος του όρους Όσσα και του αρχαίου οικιστικού μοντέλου. Βασιζόμενη στο μεθοδολογικό πλαίσιο της "βιωματικής θρησκείας" (lived religion), η αξιολόγηση αυτή όχι μόνο συμβάλλει στην κατανόηση των αρχαίων θρησκευτικών εμπειριών στο σπήλαιο Ζαρ Τρύπα, αλλά εξετάζει και ευρύτερα ζητήματα όπως η σημασία και το νόημα των "ιερών ταξιδιών" στην προχριστιανική αρχαιότητα.

Μετάφραση: Μαρία Σταματοπούλου