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# THESPROTIA EXPEDITION II
# ENVIRONMENT AND SETTLEMENT PATTERNS

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Cover: Megalo Karvounari seen from the northeast. Courtesy of the 32nd Ephorate for Prehistoric and Classical Antiquities

Layout: Esko Tikkala

# Contents

# Hellenistic Cremation Burial Practices: an Anthropological Study of Thesprotian Graves

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## Introduction

In the ancient Greek world, beliefs about death were not much different from the general framework of beliefs which was and still is common in ancient and contemporary communities.[1] Dying was not only a physical event but also a state of transition. The dead body was considered "unclean", as well as the house and the relatives of the dead. There were ethical rules that defined the appropriate acts which were necessary in order to bring the dead to their new condition and to accommodate the social and psychological needs of the living. Written legislation regarding the funeral procedures mainly had to do with the rationalization of the attitude of the living, e.g. the cost of the funeral ceremonies, the limitations in public mourning and the type of funeral monuments.[2]

A burial ceremony consisted of three ritual stages: *rosthesis*, *ekphora* and *taphe* (the actual burial).[3] In every one of those steps there is a social substratum which had to do with the duty of the living to honour the deceased, their need to purify their social environment from the taint of death, and their aim to establish the social memory of the deceased – an agent that is important for both the living and the dead, as the burial is the last action in the construction of it. Our knowledge about the first two stages mainly derives from literature and relevant scenes in pottery decoration. The last stage is what the archaeological research faces in cemetery excavations.

In Thesprotia, the detected cemeteries of the Hellenistic cities of Gitana, Elea, Doliani and Dimokastro have not been explored so far to a satisfactory extent, as the research has been limited mainly to rescue excavations. Thus a general view about the burial rituals in the region is still forming. As far as cremation is concerned, some inference about the ritual could be drawn, but the progress of archaeological research will certainly add new information and more data will come up for discussion. The present study tries to investigate the distribution of cremation as a burial ritual up to the current state of archaeological study in Thesprotia, its different aspects and its efficiency as a practical procedure.

The skeletal material under study largely comes from graves that have been unearthed during the restoration work in Gitana and during the construction of the hydroelectric dam of Kalamas, near Gitana. Two graves that contained cremations have

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[1] Kurtz and Boardman 1994, 313; Morris 1997, 12. I wish to acknowledge G. Riginos for permitting the study of the skeletal material. I express also my sincere gratitude to the Stavros Niarchos Foundation for its kind donation to the 32nd Ephoriate for Prehistoric and Classical Antiquities, which was of premium importance for establishing, organizing and equipping the Laboratory of Osteoarchaeology. Finally, special thanks to B. Forsén for being so kindly patient, as the preparation of this article coincided with rapid changes in our life.

[2] Kurtz and Boardman 1994, 67, 85, 114, 134-136, 155, 170, 189-191.

[3] Kurtz and Boardman 1994, 133-143.

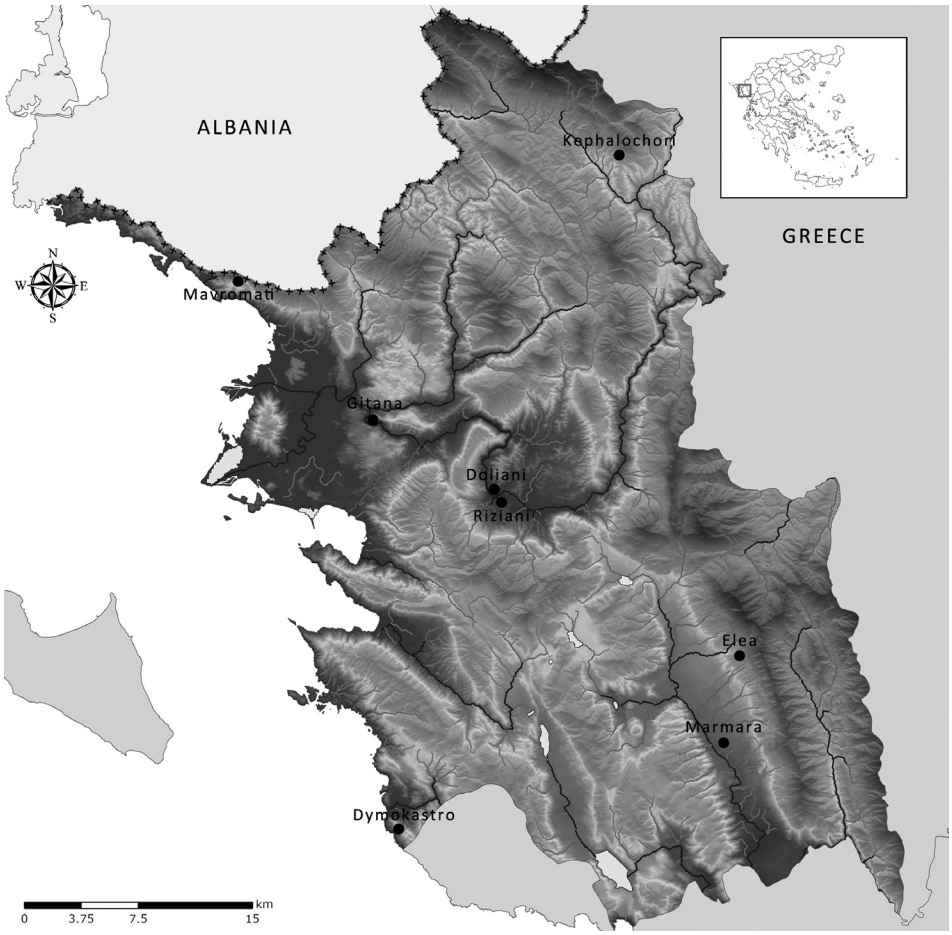


Fig 1. Archaeological sites of Thesprotia mentioned in the text.

also been discovered in Doliani, while another one was found during the construction of the border custom station in Mavromati, and one more during road work in Kephalochori, in the northern part of Thesprotia (Fig. 1). On the whole, the skeletal material from 70 graves has been examined; 42 of them were inhumations, 22 were cremation burials, 4 were found to contain both inhumation and cremation, and 2 were of unknown burial type because of their destruction in the past. In the vast majority of cremations, the bones were contained in cinerary urns. In some graves, small quantities of cremated bones were found scattered on the fill or in the floor of the graves. In order to form an opinion about the ritual, cremated bones were examined to investigate their representativeness, size and degree of burning.

## Open-air cremation. Practice and technology

There are two types of cremation that can be distinguished in the archaeological context, the primary and the secondary one. In the case of primary cremation the pyre was

constructed inside the grave, usually a pit. The dimensions of those trenches were a little larger than inhumation graves, and in some cases additional ventilation ditches were dug to achieve the necessary air supply.[4] After the construction of the pyre the body was superimposed and burnt on the spot. The remains of the pyre, bones, ashes, and offerings were laid in situ and the grave was covered with soil. On the other hand, in secondary cremation the body was burnt in a pyre that was constructed in a place elsewhere than that of the grave. Afterwards, the bones were collected, encased in clay, marble or bronze urns and entombed with the offerings.

In terms of pyrotechnology, several factors and the relationship between them affect the chemical reaction of fire and, by extension, the cremation process: sufficient fuel, temperature, oxygen and time.[5] Open-air pyres would have sufficient oxygen, except where parts of the body could be overlapped by the collapsed material of the pyre, producing a differentiation in the degree of burning due to low air supply. Modern experimental cremations demonstrate that temperatures more than 1000$^{o}$C were attainable, but the distribution was not evenly spread across the pyre and its duration was for a short period of time.[6] Temperatures of ca. 700-800$^{o}$C could be attained for some time, ensuring the effectual completion of the process.[7] Open-air pyres were by definition variable, but some control of the process could be achieved through experience and knowledge.

The actual reconstruction of an ancient open-air cremation procedure is not always possible[8] because of the variety of the agents that could influence the process. Weather conditions such as wind and rain, the quantity and quality of the wood used as fuel, the construction details of the pyre, the position of the body, and human interference during the process are critical agents for the duration and the efficient outcome of a cremation. Data from experimental pyre constructions, in combination with the archaeological evidence and the information that can be drawn from documentary sources, pictorial representations and ethnographic parallels, could provide a plausible reconstruction of cremation in antiquity.

Pottery illustrations such as those that represent the pyres of Croesus,[9] Alcmene,[10] Patroclus[11] and Hercules[12] demonstrate a box-like construction of stacked logs, arranged in horizontal layers at right angles. Different pyre constructions are illustrated in two other vessels with the myth of Hercules as a theme; in an Athenian red figure pelike,[13] logs of the pyre are irregularly stacked, while in a bell krater[14] the pyre seems to be constructed

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[4] Kurtz and Boardman 1994, 69.
[5] McDonnell 2001, 494-495; Walker *et al*. 2008, 129; McKinley 2008, 164.
[6] McKinley and Bond 2001, 284.
[7] McDonnell 2001, 496.
[8] Ubelaker and Rife 2007, 41; Xirotiris and Langenscheidt 1981, 143.
[9] Paris, Louvre, G197. Cf. *Beazley Archive* 202176; *CVA*, *Paris, Louvre* 6, III Ic, pl. 35:1-2.
[10] London, British Museum F149 (1890.2-10.1). Cf. *Beazley Archive* 425104; *CVA, London, British Museum* 2, IV E a, pl. 1:2b.
[11] Naples, Museo Archeologico Nazionale di Napoli, 81393. Cf. *LIMC* I, s.v. Achilles, no. 487, pl. 109.
[12] Rome, Museo Nazionale Etrusco di Villa Giulia, 11688. Cf. *Beazley Archive* 205585; *LIMC* V, s.v. Herakles, no. 2909, pl. 120.
[13] Munich, Antikensammlungen, 2360. Cf. *Beazley Archive* 215719; *CVA*, *München, Museum antiker Kleinkunst* 2, 19, pl. 81:1; LIMC V, s.v. Herakles, no. 2916, pl. 120.
[14] S. Agata de'Goti, Mustilli, XXXX260021. Cf. *Beazley Archive* 260021; *LIMC* V, s.v. Herakles, 129, no. 2918.

in a trench.[15] Construction details of the pyre could provide some kind of control in the cremation procedure. The building of the pyre with logs stacked and arranged in crosswise layers allowed circulation of the air[16], while the use of dry vines[17] or brushwood as fire lighter between the logs contributed to a uniform distribution of the fire.

The quantity and flammability of the wood are decisive factors that influence the cremation process as well. Homeric descriptions of the pyres of Patroclus, Achilles and Hector are rather exaggerated and pertain to the status of the deceased. Ethnographic analogies refer to about 300-500 kg of wood,[18] while experimental cremations use 700-900 kg.[19] The dimensions of primary cremation pits from archaeological contexts[20] suggest that a quantity of about 2-3 $m^3$ could be enough for an efficient cremation. The quality of wood is another agent, related to the available environmental resources. The use of hard wood that burns slowly, instead of resinous soft wood that reaches high temperatures for a short time, would be preferable, but in general the fuel used rather depended on its availability. Oak wood, which is commonly identified in the remains of a cremation, is used not just because of its availability but also because of its density that produces the prolonged high temperature which is necessary for cremation.[21] Archaeological evidence from the necropolis of Corfu also supports the use of oak as cremation fuel.[22]

After the construction of the pyre, the body was placed on the top and then the structure was lit up. The fire spread and consumed the wood and the body, providing the observant with not only a spectacle but also stimuli for most of the senses. The duration of an efficient cremation could vary, depending on the weather conditions, the fuel that was used, and human interference. In modern Nepal it takes about three to five hours, depending on the experience of those carrying out the cremation.[23] Picturing an ancient cremation, three hours after lighting, the pyre would have been burnt to a certain extent and collapsed, followed by the fall of the body. Bones and soft tissues of the thoracic and abdominal region of the body could continue to burn slowly.[24] As in modern ethnographic parallels, the reorganization of the burning wood could be needed to ensure an effective burning of the body.[25] The cremation would last up to ten hours if the fire was not doused to cool enough to allow manual collection of the cremated bones.[26] Literature sources describe the recovery of the bones the day after cremation.[27] It seems that an open-air cremation was not as quick, clean and clinical a procedure as we think it was.[28]

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[15] Stampolidis 2004, 120; Musgrave 1990a, 275.
[16] McKinley and Bond 2001, 284.
[17] Kurtz and Boardman 1994, 42.
[18] Oestigaard 2005, 15.
[19] McKinley 2008, 168.
[20] Kurtz and Boardman 1994, 69; Parlama1978, 31; Lazari 2009, 225.
[21] McKinley *et al*. 2008, 5.
[22] Lazari 2009, 225.
[23] Oestigaard 2005, 15.
[24] McKinley and Bond 2001, 284; McKinley 2008, 167-168.
[25] Gejvall 1963, 380-381; Ubelaker and Rife 2007, 42, 48, 50; Oestigaard 2005, 13.
[26] McKinley 2000, 407.
[27] Hom. *Od*. 24.64-75; Hom. *Il*. 24.785-799.
[28] Williams 2004, 271.

## Bone alteration due to cremation

Cremated bones can easily be recognized from the changes in their morphology and texture because of fire. The vast majority of them are small fragments, coloured gradually from dark brown to white, showing shrinkage, warping and transverse or parabolic fracture patterns. These changes reflect the conditions that bones experienced in the pyre. Human cremated bones commonly unearthed in archaeological excavations usually do not invite enough attention due to their poor condition of preservation, even though it could be very informative material both for the biological background of the population under study and for the cremation as a socio-ritual event and practical procedure.

Bone is a connective tissue which at molecular level consists of one third organic material (mostly collagen) and two thirds inorganic (hydroxyapatite). At the gross level, a mature bone consists of two basic components, cortical and trabecular bone. Different types of bones (e.g. long vs. flat bones) show different patterns of warping and breakage because of the difference in their structure. On a physicochemical level, cremation causes dehydration and oxidation of the organic component of the bone and recrystallisation of the inorganic material. Observations in heat-treated human bones[29] show that up to 400ºC the organic material of the bone is gradually combusted and recrystallisation of the bone mineral begins at 600ºC. At temperatures higher than 600ºC crystal growth occurs, while between 1000 and >1400ºC sintering leads to a fusion of crystals and at 1600ºC the bone mineral melts.

Macroscopically, cremated bones are classified in different grades of burning, depending on their morphology which reflects the temperatures experienced and the duration of heating. Experimental data, although presenting some variability, provide standards in heat-related bone alterations regarding colour and texture.[30] The colour of bone fragments is a function of oxygen availability, duration of heating and temperature.[31] A wide variation should be expected, since even in the same bone a range of colours can be interpreted as an effect of different cremation conditions (Fig. 2). Bones cremated at low temperatures (200-

Fig 2. Fragment of cremated femur showing differentiation in burning rate.

[29] Holden *et al*. 1995, 29-45.
[30] Shipman *et al*. 1984; Walker *et al*. 2008; Ubelaker and Rife 2007, 47-48.
[31] Ubelaker 2009, 3.

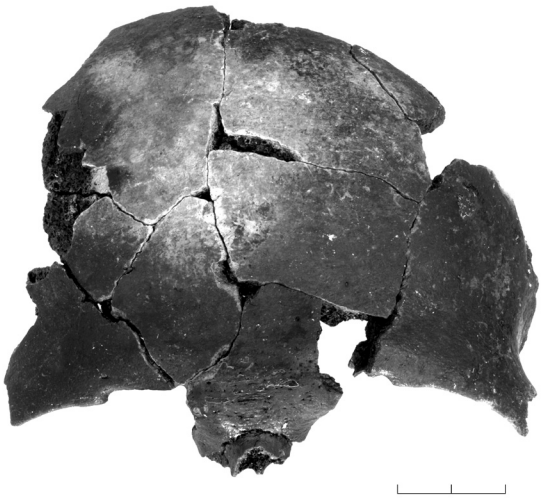

Fig 3. Skull fragments burnt at low temperature.

300°C) change from ivory to dark brown-black (slightly charred) (Fig. 3). At higher temperatures bones become grey (incompletely oxidized). At a temperature of 800°C or higher, bones acquire a blue-gray or white colour (fully oxidized).[32] At this stage, recrystallisation of the inorganic material occurs, eliminating the bone's elasticity, making it fragile and presenting shrinkage, fissuring and twisting (Fig. 4). Fissuring follows distinctive patterns according to the bone's shape, size and density.[33] Those alterations are also indicative of whether bones were burned with flesh on (green) or after the decomposition of soft tissue and fats (dry), a case in which those alterations are minimal.[34]

Fig 4. Femur fragment fully oxidized, showing shrinkage, fissuring and twisting.

## The graves under study

The archaeological research in Thesprotia during recent years has unearthed an increasing number of cremations, which have been detected either within the boundaries, if there were any, of the cemeteries of the Hellenistic cities, or in sporadic graves that cannot be associated with the already known settlements. The skeletal material under study mainly comes from rescue excavations that took place in the wider area of the archaeological sites of Gitana and Doliani, or from graves unearthed by chance during road or other infrastructure work in other parts of Thesprotia.

The archaeological site of Gitana is located at the southwestern edge of the Vrysella hill, in the confluence of the rivers Kalamas and Kalpakiotikos, a privileged position that

[32] McKinley 2000, 405; Walker *et al*. 2008, 135-136.
[33] McKinley 2000, 405; Shipman *et al*. 1984.
[34] McKinley 2000, 405; Bartsiokas 2000, 513-514.

allowed the control of the deltaic plain of the Kalamas river. The city was founded shortly after the mid-fourth century BC.[35] Livy (42.38.1) refers to Gitana as a meeting place of the Epirote League (*concilio Epirotarum*).[36] It was surrounded by a strong polygonal fortification and built according to the Hippodamian urban system. The cemetery of the settlement is located outside the northwestern fortification, but graves have also been detected alongside the Kalamas banks.

Winter rains at the end of 2003 toppled the eastern bank of the road that leads to Gitana. The rescue excavation that followed revealed 21 graves dated between the second half of the fourth century and the first half of the second century BC.[37] The vast majority of them (18) were inhumation burials, while two were found to contain both inhumations and cremations, and one was a double cremation burial with two oinochoai as cinerary urns. Additionally, between 2004 and 2005, during the excavation in the area where the public service building would be erected, 15 more graves were surveyed. Ten of them were cremation burials, three were inhumations, one contained both burned and unburned bones, and one was unidentified.

Also at the end of 2003 and the beginning of 2004, about one km west of Gitana, the excavation that preceded the construction of the hydroelectric dam of Kalamas brought to light another cluster of graves. The site was already known to belong to the wider area of the necropolis of Gitana, because a number of graves had been detected during the construction of the dam in the 1960s.[38] Also in 1987 four cist graves of the early third century BC were surveyed; one of them was found to contain cremations.[39] The recent excavation of 2003-2004 brought to light six more graves with cremations, covering a period from the early third to the first century BC.[40] About 100 m to the west, a "Π"-shaped construction regarded in the past as a small building proved to be a burial precinct, surrounding an undisturbed cist grave that was made of large rectangular monolithic limestones. Eight secondary cremations were identified. The cremated bones of the deceased were placed in clay urns and limestone caskets. The numerous offerings found dated from the late third to the first century BC.[41] In the same area, two more graves were detected: a pit burial, and a cist grave made of tiles containing a subadult inhumation.

Another group of cist graves was excavated between 2005 and 2006 in the wider area of the archaeological site of Doliani. The fairly strong fortified city has been identified as the ancient Phanote, the seat of the Thesprotian tribe of Phanoteis.[42] Part of the Hellenistic cemetery of the city is located on the opposite hill, while some graves have been unearthed in the wider area of the settlement. All in all, among 13 cist graves that were surveyed, two were found to contain cremations.

During road work that took place in Kephalochori, in the northern part of Thesprotia, in the summer of 1993, a cist grave dated from the second to the first century

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[35] Kanta-Kitsou 2008, 20.
[36] Funke *et al*. 2004, 345.
[37] *ArchDelt* 58B (2003), in press.
[38] *ArchDelt* 16B (1960), 207.
[39] Preka-Alexandri 1987, 347.
[40] *ArchDelt* 59B (2004), in press.
[41] Riginos 2005.
[42] Dakaris, 1972, 39-41.

BC was discovered.[43] The grave, typical for the Hellenistic period in Thesprotia, was built of large monolithic rectangular limestones. Six cremations were detected, placed in five clay cauldrons and one stone temple-like container. The offerings – unguentaria, clay lamps, lagynoi, kantharoi and gold wreaths, among other finds – reveal the wealth of the grave owners. All the occupants of the grave were adults. The clay cauldron ΘΕ2839 contained the cremated bones of two persons.

In 2000, a rescue excavation during the construction of the border custom station in Mavromati brought to light eleven burials of the early Hellenistic period.[44] Only three graves were found to contain some offerings (unguentaria, clay lamps). All the burials were inhumations but in cist grave number 6, along with the inhumed skeleton, an oinochoe used as a cinerary urn was detected, containing the cremated bones of a subadult.

On the whole, bones from 70 graves were examined; 45 come from the wider area that covers the cemetery of Gitana, 13 from Doliani, 11 from Mavromati and one from Kephalochori. The distribution of burials by site and type is summarized in Fig. 5. Almost one in three burials was a cremation, which represents 31.4% of the total sample, while 60.0% are inhumations. In a number of graves (5.7%) both rituals coexisted, while for a few graves (2.9%) it was not possible to distinguish whether they were cremation or inhumation burials because of their disturbance in the past. The percentage of cremations is mostly affected by the large number, up to 42.2%, of cremation burials excavated at Gitana, a percentage very close to that of inhumations (48.9%). The samples from Doliani, Mavromati and Kephalochori are fairly small and an interregional comparison could be rather implausible. At both Doliani and Mavromati, at least in the excavated parts of the cemeteries, inhumation was the predominant burial custom (76.9% and 91% respectively). The grave from Kephalochori is an exceptional finding but it is the only one unearthed in the area and could therefore not be considered a representative one.

| | Gitana | | Doliani | | Mavromati | | Kephalochori | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % | n | % |
| Cremation | 19 | 42.2 | 2 | 15.4 | | | 1 | 100 | 22 | 31.4 |
| Inhumation | 22 | 48.9 | 10 | 76.9 | 10 | 91.0 | | | 42 | 60.0 |
| Mixed | 3 | 6.7 | | | 1 | 9.0 | | | 4 | 5.7 |
| Unknown | 1 | 2.2 | 1 | 7.7 | | | | | 2 | 2.9 |
| Total | 45 | 100 | 13 | 100 | 11 | 100 | 1 | 100 | 70 | 100 |

Fig. 5. The distribution of burials by site and type.

Intraregional comparison of burials in Gitana demonstrates some variability between the three subgroups coming from the different regions of the wider cemetery (Fig. 6). In the area across the road that leads to the site, inhumation is the predominant burial custom, representing 85.7%, while cremation constitutes only 4.8% of the burials. A total of 9.5% of the graves in this area were found to contain both inhumation and cremation. On the contrary, in the area where the visitors' building was erected as well as in the dam of Kalamas, cremation clearly outnumbers inhumation, showing a percentage of 66.7% and 88.9% respectively.

[43] Riginos 1994; Riginos 1999, 174-180.
[44] *ArchDelt* 55B (2000), in press.

| | Public service building | | Fragma Kalama | | Across the road | | Total | |
|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % |
| Cremations | 10 | 66.7 | 8 | 88.9 | 1 | 4.8 | 19 | 42.2 |
| Inhumations | 3 | 20.0 | 1 | 11.1 | 18 | 85.7 | 22 | 48.9 |
| Mixed | 1 | 6.7 | | | 2 | 9.5 | 3 | 6.7 |
| Unknown | 1 | 6.7 | | | | | 1 | 2.2 |
| Total | 15 | 100 | 9 | 100 | 21 | 100 | 45 | 100 |

Fig. 6. Intraregional distribution of burial types in different areas of the cemetery of Gitana.

## Analysis of the cremated bones

Cremated bones commonly found in excavations do not only give information about the biological and demographic data of past populations, but also should be accounted for as a product of social and ritual actions, related to the way people dealt with death. The analysis of cremated bones is essential in order to understand the different stages of the ritual of cremation, while systematic data collection can provide information regarding geographical, social and individual differences or similarities about the ritual's expression. All of the cases that have been examined were secondary cremations, contained in clay urns or stone containers (Fig. 7). The Minimum Number of Individuals (MNI) was determined

Fig. 7. Clay urns and stone containers from Thesprotia.

for each cinerary urn and grave. The estimation of each cremation's efficiency was based on the macroscopic appearance and colouration of the bones. The length of the largest bone fragment was measured and used as an indicator of fragmentation for comparison with the already published data.[45] The cremated bones of each urn were weighed in order to estimate the amount of bones recovered from the pyre. Comments regarding age and sex were recorded wherever the material allowed those observations. The data from the total of the skeletal material are summarized in Appendix I.

*Minimum Number of Individuals (MNI)*

The estimation of the Minimum Number of Individuals is essential for any further discussion of the material under study. The estimation was based on the identification and grouping of bones that occur singly or in pairs in each individual. Parts of bones that usually survive the extreme fragmentation and are identifiable, such as the petrous and mastoid parts of the temporal, the supraorbital part of the frontal, the articulating processes and the mental protuberance of the mandible, the part of the occipital with the internal and external occipital protuberance, the epiphyses of long bones, wherever they survive are good indicators to estimate the number of persons or at least the minimum number of individuals represented in a grave or in a single urn.

As mentioned above, 26 of 70 graves that have been examined contained secondary cremations in cinerary urns or stone containers. The skeletal material from 22 of 26 graves that was available for study represents a minimum number of 40 individuals. While in the vast majority of 34 urns that have been found, one individual was identified in each of them, in ΘΕ2839 from Kephalochori and ΘΕ7084 from Fragma Kalama bones belonging to two individuals have been recognized. The remains of the other 4 individuals have been identified in graves that were disturbed or destroyed in the past and thus found scattered in the fill of the grave. The number of individuals identified in each grave varies from one, usually in pit burials, to six (Kephalochori) or even eight (grave 11 from Fragma Kalama) in what have been used as collective family graves for a long period of time.

*Weight*

The total weight of bones that could be expected from an adult individual after a modern cremation varies from 1000 to 3600 g[46] depending on sex, age and skeletal robusticity. Those observations refer to modern crematoria where the conditions are completely managed. In open-air cremations surveyed in archaeological contexts, a great variation in the amount of bones included in urns should be expected. The weights vary, both geographically and temporally, from a few grams, collected in a symbolic, sampling or imperfect manner, up to 2000 g,[47] indicating meticulous collection. Variation in the amount of bones that have been collected from the pyre debris reflects a variation in the attitude of the mourners that carried out this task.

In order to investigate this aspect of the ritual, the cremated bones from all the graves were weighed to find out the amount of bones contained in each urn. From the total 30,504 g of bones that were examined, 28,421 g come from urns or containers while 2083 g were found in the fill of the graves. A range from 1 to 2191 g was observed in

[45] Musgrave 1990b, 310.
[46] McKinley 2000, 404; Musgrave 1990a, 272.
[47] Musgrave 1990a, 286.

| Arch. Site | Mean | Median | St. Deviation | Range | Minimum | Maximum | Sample Size |
|---|---|---|---|---|---|---|---|
| Lefkandi | | | | 2021 | 1 | 2022 | 54 |
| Gypsadhes | 553 | 465 | 230 | 670 | 280 | 950 | 11 |
| KNC | 650 | 543 | 521 | 2323 | 1 | 2324 | 74 |
| Torone | 301 | 204 | 319 | 1513 | 9 | 1522 | 60 |
| Perati | 499 | 410 | 503 | 1740 | 1 | 1741 | 12 |
| Phoinicas | 938 | 953 | 561 | 1725 | 113 | 1838 | 12 |
| Vergina II: Female | 1312 | | | | | | 1 |
| Vergina III | 615 | | | | | | 1 |
| Nea Mihaniona II | 1239 | | | | | | 1 |
| Nea Mihaniona III | 1390 | | | | | | 1 |
| Derveni Beta | 1968 | | | | | | 1 |
| Thesprotia | 907 | 870 | 509 | 1813 | 159 | 1972 | 27 |

Fig. 8. Cremation weights from various sites (after Musgrave 1990b, 310, Table 1) and comparison with those from Thesprotia.

the examined urns. However, this range represents urns which were disturbed and their content found scattered in the fill of the grave, or which contained a double interment. For a view as accurate as possible of the mortuary procedure, the scattered material as well as the remains from two urns that contained more than one individual (ΘE7084 containing 1267 g, and ΘE2839 containing 2191 g of cremated bones) were excluded from calculation. Finally, 27 of 34 urns met those requirements: they contained a single interment and were undisturbed (Appendix II). The weight of the cremated bones of those urns is 24,488 g, representing 80% of the total amount of the collected bones. The minimum weight (159 g) was observed in a pit burial (ΘE7043) in a ditch, and the maximum (1.972 g) in a temple-like stone casket (ΘE7083), giving a range of 1813 g and a mean of 906.96 g. Fig. 8 presents the already published cremation weights from other sites in Greece[48] for comparison with those found in Thesprotia.

The main question about the amount of collected bones is whether this differentiation in the mourners' attitude demonstrates variation in the expressed care for the deceased and, by extension, whether the weight of a cremation is possibly associated with social status. Musgrave assumes that the care over bone collection concerns differences in familial attitudes.[49] The division of urns under study in two groups, where the first includes urns (n=12) from 11 pit burials and the second urns (n=15) from five large cist graves, usually with numerous offerings, reflects a differentiation in the weight of the cremated bones collected from the pyre (Fig. 9). This outlined "inequality", at least according to the data available so far, indicates that the relatives or other persons with the duty to collect the cremated bones from the pyre were much more thorough when they handled the cremains of individuals whose urns were intended to be placed in "rich" cist

| | Pit burial urns | Cist grave urns |
|---|---|---|
| n | 12 | 15 |
| Mean | 516.9 | 1219 |
| Median | 430.5 | 1316 |
| St. Deviation | 279.1 | 430.4 |
| Range | 929 | 1530 |
| Minimum | 159 | 442 |
| Maximum | 1088 | 1972 |

Fig. 9. Descriptive statistics of the weights of cremated bones collected from pyres, according to the type of grave they come from.

[48] Musgrave 1990b, 310, Table 1.
[49] Musgrave 1990a, 286.

graves than those in "poor" pit burials. Whether this attitude reflects other symbolism, besides the potential of the wealthy to access better "cremation facilities" and their aim to create and support their social memory, is a matter of discussion and more data are needed in order to pursue it.

*Fragmentation*

Fragmentation in cremated bones is highly associated with the stresses that the bones experience in the pyre. The dehydration of the bone and the destruction of its collagen that occur in the pyre result in the loss of its elasticity and its tensile strength. Eventually bones begin to shrink, warp, twist and fracture along the lines of greatest stress.[50] Again a great variability should be expected according to the type of bone and the different conditions in an open-air pyre. Furthermore, the collapse of the pyre's structure, the probable reorganization of the burning material, and stoking of the fire would result in further partitioning of the already fragmented bones. The morphological appearance of bones under study mainly consists of small fragments about 15-60 mm long with curved, transverse or longitudinal fracture patterns. Some fragments are between 60-100 mm, and very few are more than 100 mm.

Some researchers do not exclude the possibility of post-cremation processing and deliberate crushing of the bones in order to fit into their containers,[51] while others maintain that there is no conclusive evidence for such a practice and that much fragmentation occurs also after burial.[52] The length of the longest postcranial fragment has been used as a possible indicator of post-cremation processing of the bones.[53] Fig. 10 presents the already published data[54] and the lengths that were observed in the sample from Thesprotia. Following the previous division of urns in two groups, a differentiation

| Arch. Site | Mean | Median | St. Deviation | Range | Minimum | Maximum |
|---|---|---|---|---|---|---|
| Lefkandi | | | | 2021 | 1 | 2022 |
| Gypsadhes | 553 | 465 | 230 | 670 | 280 | 950 |
| KNC | 650 | 543 | 521 | 2323 | 1 | 2324 |
| Torone | 301 | 204 | 319 | 1513 | 9 | 1522 |
| Perati | 499 | 410 | 503 | 1740 | 1 | 1741 |
| Phoinicas | 938 | 953 | 561 | 1725 | 113 | 1838 |
| Vergina II: Female | 1312 | | | | | |
| Vergina III | 615 | | | | | |
| Nea Mihaniona II | 1239 | | | | | |
| Nea Mihaniona III | 1390 | | | | | |
| Derveni Beta | 1968 | | | | | |
| Thesprotia | 907 | 870 | 509 | 1813 | 159 | 1972 |

Fig. 10. Length of the longest postcranial fragment from various sites (after Musgrave 1990b, 310, Table 2) and comparison with those from Thesprotia.

[50] Bontrager and Nawrocki 2008, 216.
[51] Gejvall 1963, 381; Paidousis and Sbarounis 1979, 3.
[52] Musgrave 1990a, 285; McKinley and Bond 2001, 289.
[53] Musgrave 1990b, 320.
[54] Musgrave 1990b, 310, Table 2.

also in size was observed, although not so clear as with weight. The fragments from cist grave urns show a higher average length even though some overlapping is observable (Fig. 11).

| | Pit burial urns | Cist grave urns |
|---|---|---|
| n | 12 | 15 |
| Mean | 86.2 | 102.0 |
| Median | 78.8 | 102.1 |
| St. Deviation | 30.2 | 21.6 |
| Range | 99.3 | 80.3 |
| Minimum | 49.9 | 64.2 |
| Maximum | 149.2 | 144.4 |

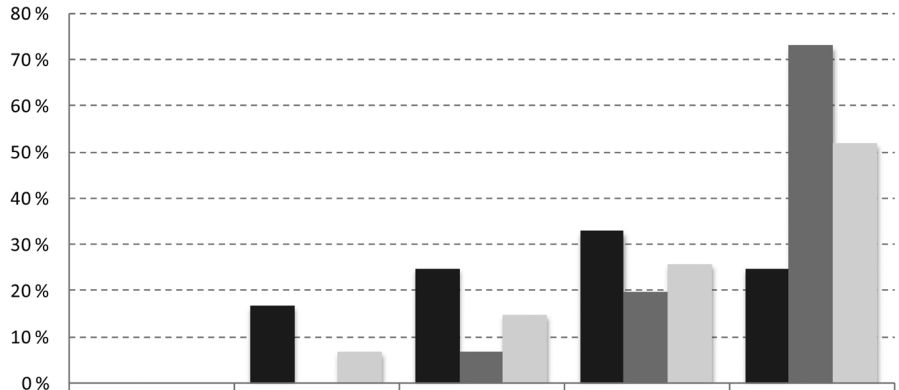
Fig. 11. Descriptive statistics of the length of the longest postcranial fragment included in urns, according to the type of grave they come from.

It is difficult to draw an inference from the available data as to whether pounding of the cremated bones was applied before their collection. It would be interesting to investigate whether there is a correlation between the length (and also the weight) of bones and the cubic capacity of the urns, but this was not possible as most of the urns are part of the permanent exhibition of the Archaeological Museum of Igoumenitsa. It would also be interesting to investigate whether the dissimilarity in size reflects differences in the procedure of cremation, especially regarding the construction of the pyre and the degree of human interference during cremation, but no pyre site has been detected yet in Thesprotia. Different taphonomic conditions are also a factor that could cause further reduction in fragment size. Urns in pit burials are much more vulnerable to matrix compressions than those in cist graves. Thus, as the bone fragment size is affected by several factors, it remains unclear whether the observed difference is a result of deliberate pounding, different cremation procedures, or even post-depositional effects.

*Efficiency of cremation*

As already mentioned, cremated bones display a variation in colour, ranging from brown, black or grey to chalky white. These changes are evidence of temperatures achieved in the pyre, as experimental work has shown that there is a relationship between temperature and bone colour. The latter is also illustrative of the conditions that bones experienced in the pyre, such as the differences in oxygen availability, the time of exposure to high temperatures, the density of soft tissue that covered a bone, or the distribution of "working temperatures" across the pyre. This variation that usually occurs in bones from a single cremation or even in a single bone should be expected when working with material from open-air pyres. An effective cremation needs sufficient time and high temperature; the colour variation from bone to bone is therefore important to record any difference. The proportion between white, fully oxidized bones and grey, partially oxidized or black, charred ones could represent the cremation's efficiency.

The analysis of colour variation has been based on a categorization of bones with a five-step scale that represents the degree of success in the outcome of a cremation. The scale comprises "poor" for mostly unburnt or charred bones, "medial" for equal proportions of charred, partially and completely oxidized bones, "good" for mostly partially oxidized bones with a proportion of fully oxidized, "very good" for mostly fully oxidized bones with a proportion of incompletely oxidized, and "excellent" for fully oxidized bones. As can be seen in Fig. 12, 52% of the total sample consisted of fully oxidized bones, 41% were characterized as "good" or "very good", and only 7% contained a proportion of unburnt or charred bones. The previous difference in weight and size between pit burial urns and cist grave urns is also observable regarding the efficiency of cremation. While most of the pit burial urns (58%) fall into the "good" and "very good" category, the vast majority of cist grave urns (73%) present an excellent




| | Poor | Medial | Good | Very good | Excellent |
|---|---|---|---|---|---|
| Pit burials | 0 % | 17 % | 25 % | 33 % | 25 % |
| Cist graves | 0 % | 0 % | 7 % | 20 % | 73 % |
| Total | 0 % | 7 % | 15 % | 26 % | 52 % |

Fig. 12. The distribution of cremated bones according to burial type and cremation efficiency.

burning rate. The overwhelming majority of oxidized bones with the expected gradation observed in the total sample shows the experience of those who carried out this task, and the care given to the cremation procedure to achieve high temperatures (over 800$^{o}$C) for a prolonged period of time in order to accomplish an efficient outcome.

## Discussion

Burial rituals are deeply symbolic practices, because they involve psychological, social and ideological aspects of life of the participants. Mortuary practices and ritualistic behaviour are motivated by the will to represent the social identity of the individual and the responsibility that other members of the social group recognize for the deceased. Funerary rites as rites of passage serve the transition of the deceased from the state of being to the state of the dead, a process that is important both for the dead and the living, as it is the last action in the construction of social identity and social memory. Burial rituals are also important as public social acts that are manipulated by a network of social and ethical rules. Thus, differences in mortuary treatment, expressed within a population, may reflect different facets of economic, religious or social life, even though the distinct archaeological evidence is difficult to correlate with the vague picture of social structures and networks, or with the now lost symbolism of highly symbolic practices such as burial rituals.

Within this framework, an effort to understand the motivation behind the choice of inhumation or cremation as burial treatment during the Hellenistic period in Thesprotia was attempted, using the hitherto available data. Archaeological research shows that cremation was a common burial treatment, representing approximately one third of the burials. Particularly in Gitana, where most of the material under study comes from, cremation is almost as common as inhumation at least in the so far excavated parts of the cemetery. Some of the richest burials discovered so far, such as those from Fragma

Kalama and Kephalochori, were cist graves that contained secondary cremations. Still, the accumulated wealth of those graves, over their long period of use, is not enough to establish cremation as an indicative factor for social status. Thus, there are cremation burials that hardly could be characterized as rich, regarding the wealth of the contained offerings and their construction details. Furthermore, archaeological research has revealed graves that could be characterized as belonging to high-rank individuals, such as the burial monument in Marmara, Zervochori, where the deceased were inhumed,[55] or the graves from Prodromi[56] and Riziani, where both rituals co-existed.[57] Thus, cremation could not be associated only with social rank, supposing that the latter is expressed by the wealth of a grave.

The adoption of cremation or inhumation does not necessarily mean different conceptions of afterlife. The two rituals differ in the way that the dead body is transformed from the one state to the other. During cremation this process is much faster; fire functions as an agent of transformation of the identity of the deceased and as a means of transportation across the boundaries,[58] while the entire procedure was a visual spectacle observed by the performers of the ritual. Cremation also required the participation of the mourners in its different stages and would be sharply etched in their collective memory.[59] On the contrary, in the case of inhumation the body transforms gradually without any human participation and the mourners remain with an intact picture of the body. Consequently, even though cremation and inhumation serve the same practical purpose, which is the disposal of the dead, or the same ethical purpose, which is burial with the appropriate honours and the transformation from living person to dead ancestor, they do it in different ways that lead to a difference in the construction of social collective memory.

The choice of one or the other burial treatment could be a matter of personal will, as the deceased may have issued instructions concerning the way they would like to be remembered,[60] or could be a result of social relationships which enforce obedience to a specific ritual. The latter is the most interesting possibility regarding the reconstruction of social organization, even though "mortuary material *may* mirror societal organization, but may also distort and idealize social relationships".[61] Both views are difficult to detect in the mortuary record. Intraregional comparison and spatial distribution of cremation and inhumation in the cemetery of Gitana (see Fig. 6) show a probable clustering of burials, but the data are still insufficient as only parts of the entire cemetery has been excavated. Thorough investigations to a sufficient extent of the Hellenistic cemeteries and contextual analysis of archaeological data, both unavailable at the moment, are required in order to form an opinion about the motivation behind the adoption of the one or the other ritual.

The analysis of the cremated bones illuminates some aspects of the mortuary ritual of cremation during the Hellenistic period in Thesprotia.

Cremation was used either in individual graves such as the pit burials, or in collective family graves that were used again and again for a long period of time such

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[55] Riginos 1992, 351; Riginos 1999, 172-174. For the bones, see Tsinas 2008.
[56] Choremis 1980, 18.
[57] *ArchDelt* 62B (2007), in press.
[58] Oestigaard 1999, 359.
[59] Williams 2004, 271.
[60] Williams 2004, 265.
[61] Owen 2006, 357.

as the big cist graves. In the second case, not only the cremation but also the grave itself functioned as a spot of collective memory for the members of a family.

The coexistence of cremation and inhumation within the boundaries of a cemetery has been discussed previously, but in some cases both burial rituals were detected even in the same grave. It is unclear yet whether this is an intentional act or a result of intrusion.

Standard sex determination and age estimation methods applied to cremated bones, although with a fair amount of uncertainty, provide some interesting information regarding the demographic data (see Appendix I). Cremation was practiced for both sexes and mainly for adults, except in two cases – the remains of a child from cist grave 11 at Fragma Kalama and the remains of a subadult from grave 6 at Mavromati, Sagiada.

The weight of the cremated bones has been used as an indicator of the attitude of the mourners, regarding the care over collecting the cremated bones from the pyre. The difference that was observed between the urns from cist graves and those from pit burials may reflect a difference in the status of the deceased. Some "inequality" was also observed regarding the efficiency of cremation. Bones from cist grave urns were more oxidized than those from pit burial urns, a fact that probably reflects better cremation facilities, namely more and perhaps higher-quality wood and sufficient time. Bone fragment size is affected by several factors, and it remains unclear whether the observed differentiation resulted from human interference or taphonomic conditions.

The present study tries to investigate the distribution of cremation as a burial ritual based on the archaeological research in Thesprotia up to date, its different aspects and its efficiency as a practical procedure. All of the cases that have been examined were secondary cremations in clay cinerary urns or stone containers. No primary cremation burials during Hellenistic times have been found or reported in Thesprotia so far. The Roman cemetery recently excavated in Mazarakia, where primary cremation is the predominant burial type, provides an opportunity of comparison between mortuary rituals of local and foreign origin. Further excavations in the detected cemeteries of the Hellenistic cities of Gitana, Elea, Doliani and Dimokastro are required in order for us to understand their structure and burial practices.

## Appendix I - Data for Hellenistic Cremation Burials from Thesprotia

| Archaeological Site | Burial | Urn | Type of Urn | Weight | Largest Fragment | Colour | Burning Rate | Sex | Age | MNI |
|---|---|---|---|---|---|---|---|---|---|---|
| Doliani, Latomeio | 1 | ΘE 7735 | Pelike | 1065 | 79.39 | White | Excellent | ? | Adult | 1 |
| Doliani, Necropolis | 10 | ΘE 6895 | Oinochoe | 1480 | 110.47 | White | Excellent | M? | Adult | 1 |
| Doliani, Necropolis | 10 | ΘE 7319 | Amphora | 1322 | 70.78 | Grey-white-black-brown | Good | M? | Adult | 1 |
| Gitana | - | ΘE 6853 | Hydria | 1088 | 149.22 | White | Excellent | F? | Adult | 1 |
| Gitana, Fragma Kalama | 5 | Scattered | | 233 | 84.94 | White | Excellent | ? | Adult | 1 |
| Gitana, Fragma Kalama | 9 | Scattered | | 252 | 54.3 | Black-grey-white | Medial | F? | Adult | ? |
| Gitana, Fragma Kalama | 9 | ΘE 3446 | Amphora | 1390 | 64.19 | White-grey | Very good | M? | Adult | 1 |
| Gitana, Fragma Kalama | 9 | ΘE6544 | Amphora | 1 | 31.31 | White | Excellent | ? | ? | ? |
| Gitana, Fragma Kalama | 9 | MAP1/16-2-2004 | Temple like container | 870 | 102.05 | White | Excellent | ? | Adult | 1 |
| Gitana, Fragma Kalama | 9 | Π57/16-12-2004 | | 15 | 26.88 | White | Very good | ? | Adult | ? |
| Gitana, Fragma Kalama | 11 | ΘE 6492 | Stamnoid pot | 1437 | 119.48 | White | Excellent | M? | Old Adult | 1 |
| Gitana, Fragma Kalama | 11 | ΘE 6496 | Oinochoe | 1034 | 119.11 | White | Excellent | F? | Adult | 1 |
| Gitana, Fragma Kalama | 11 | ΘE 6503 | Lebes | 1435 | 89.4 | White | Excellent | M? | Adult | 1 |
| Gitana, Fragma Kalama | 11 | ΘE 6504 | Lebes | 1888 | 112.2 | White | Excellent | M? | Old Adult | 1 |
| Gitana, Fragma Kalama | 11 | ΘE 7083 | Temple like container | 1972 | 144.44 | White | Excellent | M? | 35+ | 1 |
| Gitana, Fragma Kalama | 11 | ΘE 7084 | Temple like container | 1267 | 101.38 | White | Excellent | ?-? | Adult | 2 |
| Gitana, Fragma Kalama | 11 | ΘE 7085 | Cylindrical container | 442 | 124.8 | White-grey | Very good | ? | 7y +/- 24m | 1 |
| Gitana, Fragma Kalama | 13 | Π53/4-2-2004 | | 421 | 95.39 | White | Excellent | M? | Adult | 1 |
| Gitana, Road | 7 | Π19/17-11-2003 | | 384 | 116.12 | White-grey | Very good | F? | Adult | 1 |
| Gitana, Road | 12 | ΘE 6505 | Oinochoe | 635 | 113.77 | White | Very good | F? | Adult | 1 |
| Gitana, Road | 12 | ΘE 7257 | Oinochoe | 976 | 80.65 | Brown-black-white | Good | ? | Adult | 1 |
| Gitana, Road | 19 | Π42/20-11-2003 | | 422 | 105.33 | White-grey | Very good | ? | Adult | 1 |
| Gitana, Visitors' Building | Pot 1 | ΘE 7043 | Lagynos | 159 | 64.64 | Grey-white-black | Medial | ? | Adult | 1 |
| Gitana, Visitors' Building | Pot 2 | Π170/31-5-2005 | | 269 | 70.2 | Grey-white | Good | ? | Adult | 1 |
| Gitana, Visitors' Building | Pot 3 | Π195/3-6-2005 | | 559 | 57.96 | Grey-white-black | Good | ? | Adult | 1 |
| Gitana, Visitors' Building | Pot 4 | ΘE 7242 | Oinochoe - Lagynos | 593 | 76.9 | Black-brown-grey-white | Medial | M? | Adult | 1 |
| Gitana, Visitors' Building | 5 | Scattered | | 200 | 76.05 | White | Excellent | ? | Adult | 1 |
| Gitana, Visitors' Building | 5 | Π114/10-12-2004 | | 52 | 47.42 | White | Excellent | ? | - | ? |
| Gitana, Visitors' Building | 6 | Scattered | | 162 | 72.21 | White-grey-black | Very good | ? | Adult | 1 |
| Gitana, Visitors' Building | 7 | Scattered | | 693 | 93.08 | Adult: grey-white, Subadult: white | Very good | ?-? | Subadult, Adult | 2 |

| Archaeological Site | Burial | Urn | Type of Urn | Weight | Largest Fragment | Colour | Burning Rate | Sex | Age | MNI |
|---|---|---|---|---|---|---|---|---|---|---|
| Gitana, Visitors' Building | 7 | ΘE 6791 | Lagynos | 29 | 41.57 | Grey-white | Good | ? | - | ? |
| Gitana, Visitors' Building | 8 | Scattered | | 26 | 50.56 | White | Excellent | ? | Adult | 1 |
| Gitana, Visitors' Building | 11 | Scattered | | 111 | 53.03 | White-grey-black | Very good | ? | Adult | - |
| Gitana, Visitors' Building | 11 | Scattered | | 158 | 64.39 | White-grey | Very good | ? | Adult | - |
| Gitana, Visitors' Building | 13 | Scattered | | 185 | 101.16 | White-grey | Very good | ? | Adult | - |
| Gitana, Visitors' Building | 13 | ΘE 7254 | Amphora | 230 | 56.69 | White-grey | Very good | ? | Adult | - |
| Gitana, Visitors' Building | 14 | Scattered | | 63 | 60.86 | White-grey | Very good | ? | Adult | 1 |
| Gitana, Visitors' Building | 14 | Π276/30-6-2005 | | 439 | 54.4 | White-grey | Very good | ? | Adult | 1 |
| Kephalochori | 1 | - | - | 1252 | 84.94 | White | Excellent | ? | Adult | 1 |
| Kephalochori | 1 | ΘE 2838 | Pithoid pot | 802 | 99.49 | White-grey | Very good | F? | Adult | 1 |
| Kephalochori | 1 | ΘE 2839 | Chytroid pot | 2191 | 105.45 | White | Excellent | F?-? | Adult | 2 |
| Kephalochori | 1 | ΘE 2841 | Chytroid pot | 1316 | 100.31 | White | Excellent | F? | Adult | 1 |
| Kephalochori | 1 | ΘE 2868 | Chytra | 580 | 109.37 | White | Excellent | ? | Adult | 1 |
| Kephalochori | 1 | ΘE2803-Scattered | Skyphos | 148 | 48.76 | White-grey | Very good | ? | ? | 1 |
| Mavromati | 6 | ΘE 8069 | Lekythos or Oinochoe | 258 | 49.91 | White | Excellent | ? | Subadult | 1 |

## Appendix II - Data for Hellenistic Cremation Burials from Thesprotia (found undisturbed and containing only one interment)

| Archaeological Site | Burial | Urn | Type of Urn | Weight | Largest Fragment | Color | Burning Rate | Sex | Age | MNI |
|---|---|---|---|---|---|---|---|---|---|---|
| Gitana, Road | 7 | Π19/17-11-2003 | | 384 | 116.12 | White-grey | Very good | F? | Adult | 1 |
| Gitana, Road | 12 | ΘE 7257 | Oinochoe | 976 | 80.65 | Brown-black-white | Good | ? | Adult | 1 |
| Gitana, Road | 12 | ΘE 6505 | Oinochoe | 635 | 113.77 | White | Very good | F? | Adult | 1 |
| Gitana, Road | 19 | Π42/20-11-2003 | | 422 | 105.33 | White-grey | Very good | ? | Adult | 1 |
| Gitana | - | ΘE 6853 | Hydria | 1088 | 149.22 | White | Excellent | F? | Adult | 1 |
| Gitana, Visitors' Building | Pot 1 | ΘE 7043 | Lagynos | 159 | 64.64 | Grey-white-black | Medial | ? | Adult | 1 |
| Gitana, Visitors' Building | Pot 2 | Π170/31-5-2005 | | 269 | 70.2 | Grey-white | Good | ? | Adult | 1 |
| Gitana, Visitors' Building | Pot 3 | Π195/3-6-2005 | | 559 | 57.96 | Grey-white-black | Good | ? | Adult | 1 |
| Gitana, Visitors' Building | Pot 4 | ΘE 7242 | Oinochoe - Lagynos | 593 | 76.9 | Black-brown-grey-white | Poor | M? | Adult | 1 |
| Gitana, Visitors' Building | 14 | Π276/30-6-2005 | | 439 | 54.4 | White-grey | Very good | ? | Adult | 1 |
| Gitana, Fragma Kalama | 9 | ΘE 3446 | Amphora | 1390 | 64.19 | White-grey | Very good | M? | Adult | 1 |
| Gitana, Fragma Kalama | 9 | MAP1/16-2-2004 | Temple like container | 870 | 102.05 | White | Excellent | ? | Adult | 1 |
| Gitana, Fragma Kalama | 11 | ΘE 7085 | Cylindrical container | 442 | 124.8 | White-grey | Very good | ? | 7y +/- 24m | 1 |
| Gitana, Fragma Kalama | 11 | ΘE 6503 | Lebes | 1435 | 89.4 | White | Excellent | M? | Adult | 1 |
| Gitana, Fragma Kalama | 11 | ΘE 7083 | Temple like container | 1972 | 144.44 | White | Excellent | M? | 35+ | 1 |
| Gitana, Fragma Kalama | 11 | ΘE 6504 | Lebes | 1888 | 112.2 | White | Excellent | M? | Old Adult | 1 |
| Gitana, Fragma Kalama | 11 | ΘE 6496 | Oinochoe | 1034 | 119.11 | White | Excellent | F? | Adult | 1 |
| Gitana, Fragma Kalama | 11 | ΘE 6492 | Stamnoid pot | 1437 | 119.48 | White | Excellent | M? | Old Adult | 1 |
| Gitana, Fragma Kalama | 13 | Π53/4-2-2004 | | 421 | 95.39 | White | Excellent | M? | Adult | 1 |
| Doliani, Latomeio | 1 | ΘE 7735 | Pelike | 1065 | 79.39 | White | Excellent | ? | Adult | 1 |
| Doliani, Necropolis | 10 | ΘE 7319 | Amphora | 1322 | 70.78 | Grey-white-black-brown | Good | M? | Adult | 1 |
| Doliani, Necropolis | 10 | ΘE 6895 | Oinochoe | 1480 | 110.47 | White | Excellent | M? | Adult | 1 |
| Mavromati | 6 | ΘE 8069 | Lekythos Oinochoe | 258 | 49.91 | White | Excellent | ? | Subadult | 1 |
| Kephalochori | 1 | ΘE 2838 | Pithoid pot | 802 | 99.49 | White-grey | Very good | F? | Adult | 1 |
| Kephalochori | 1 | ΘE 2868 | Chytroid pot | 580 | 109.37 | White | Excellent | ? | Adult | 1 |
| Kephalochori | 1 | ΘE 2841 | Chytroid pot | 1316 | 100.31 | White | Excellent | F? | Adult | 1 |
| Kephalochori | 1 | - | - | 1252 | 84.94 | White | Excellent | ? | Adult | 1 |

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