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VISVIKI MAGOULA NEAR VELESTINO THE LATE NEOLITHIC FINDS IN CONTEXT*

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ΠΕΡΙΛΗΨΗ

ΜΑΓΟΥΛΑ ΒΙΣΒΙΚΗ ΣΤΟ ΒΕΛΕΣΤΙΝΟ: ΕΥΡΗΜΑΤΑ ΤΗΣ ΥΣΤΕΡΗΣ ΝΕΟΛΙΘΙΚΗΣ ΕΠΟΧΗΣ

Η μαγούλα Βισβίκη, ένας νεολιθικός οικισμός με μορφή λόφου στο νοτιοανατολικό τμήμα της θεσσαλικής πεδιάδας κοντά στη λίμνη Κάρλα, είναι μία από τις ανασκαφές που διεξήχθησαν στην Ελλάδα από τον διευθυντή του «Reichsamt für Vorgeschichte» (Αυτοκρατορική Υπηρεσία για την Προϊστορία), H. Reinerth. Η ανασκαφή έγινε γνωστή εξαιτίας της εύρεσης ενός λεγόμενου μεγάρου, που χρονολογήθηκε στη φάση Αράπη. Από τη μελέτη των σχεδίων, όμως, φάνηκε ότι με βάση τα οικιστικά κατάλοιπα που βρέθηκαν στο ψηλότερο σημείο της μαγούλας δεν είναι δυνατόν να αναπαρασταθεί κάποιο «μέγαρο»· αντίθετα, αυτά ανήκουν μάλλον σε περισσότερες οικοδομικές φάσεις.

Από το ανασκαφικό υλικό διατηρούνται πάνω από 3.000 θραύσματα κεραμικής. Τα ευρήματα από τα κατώτερα στρώματα μιας τομής στο βορειοδυτικό τμήμα της μαγούλας μαρτυρούν την αρχή του οικισμού στην πρώιμη Μέση Νεολιθική. Ορισμένα κεραμικά ευρήματα χρονολογούνται στις επόμενες φάσεις της Μέσης Νεολιθικής, όπως επίσης, και στη φάση Τσαγγλί-Λάρισα. Ελάχιστα θραύσματα φανερώνουν χρήση του χώρου κατά τη διάρκεια της Τελικής Νεολιθικής (Χαλκολιθικής) και στην αρχή της Πρώιμης Εποχής του Χαλκού.

Το μεγαλύτερο μέρος της διακοσμημένης με γραπτά μοτίβα και της μονόχρωμης κεραμικής ανήκει στις φάσεις Αράπη και Διμήνη της Ύστερης Νεολιθικής. Ενώ η διακοσμημένη κεραμική της φάσης Αράπη διακρίνεται για τη μεγάλη ποικιλία στο σχηματολόγιο των αγγείων της, το ρεπερτόριο της διακοσμημένης κεραμικής της φάσης Διμήνη περιορίζεται σε μεγάλο βαθμό σε φιάλες και λεκάνες. Για τη φάση του Διμηνίου είναι δύσκολο να παρακολουθήσουμε τη διάκριση που πρότεινε ο Hauptmann σε δύο ομάδες, μια πρωιμότερη, την Οτζάκι Α, και μια πιο ύστερη, την Οτζάκι Β. Σε κάθε περίπτωση η εμφάνιση της γραπτής κεραμικής του Διμηνίου με καστανό χρώμα επάνω σε λευκό βάθος (Brown on Cream) στα ανώτερα στρώματα της μαγούλας Βισβίκη μαρτυρά μια σχετικά ύστερη χρονολόγηση αυτής της κεραμικής ομάδας. Το σχηματολόγιο της εγχάρακτης κεραμικής είναι περιορισμένο και σε αυτό κυριαρχούν οι λεκάνες με αποφύσεις. Υπάρχουν, επίσης, και διχαλωτές λαβές με προσεγμένη εγχάρακτη διακόσμηση, που έχουν παράλληλα στη μαγούλα Πευκάκια. Όπως φαίνεται από τα σχήματά της, η μονόχρωμη κεραμική της φάσης Αράπη χρησιμοποιούνταν πιο συχνά για κατανάλωση φαγητού και ποτού. Αντίθετα, η παραγωγή της μονόχρωμης κεραμικής της φάσης Διμήνη φαίνεται ότι εξυπηρέτούσε περισσότερο το μαγείρεμα και την αποθήκευση.

Πετρογραφικές αναλύσεις δείχνουν ότι η μαγούλα Βισβίκη αποτελούσε μέρος ενός δικτύου με επαφές στα βορειοανατολικά και βορειοδυτικά της θεσσαλικής πεδιάδας, καθώς και με την ευρύτερη περιοχή δυτικά του Βόλου. Τα σχή-

* This article is a summary of some results of the publication of the excavations of Visviki Magula (Alram-Stern & Dousougli-Zachos 2015). The project was granted by the Institute of Aegean Prehistory, Philadelphia and the Austrian Science Fund P 21596-G19 “Visviki Magula/Velestino”. We would like to thank all those who supported this project, provided us with material and allowed us to study it, L. Papazoglou-Manioudaki, K. Paschalides, E. Konstantinidi-Syvridi, A. Christopoulou, K. Manteli (National Museum at Athens, Prehistoric Collection), G. Schöbel, P. Walter, J. Hummler (Pfahlbaumuseum at Unteruhldingen), B. Hänsel (Freie Universität Berlin), J. Heiden and U. Dirschedl (Archives of the German Archaeological Institute Berlin and Athens), V. Rondiri (13th Ephorate of Prehistoric and Classical Antiquities), G. Toufexis and K. Gallis (15th Ephorate of Prehistoric and Classical Antiquities) and A. Moundrea Agrafioti (University of Thessaly). German-Greek translation: M. Kitsatis, English proofing: M. Pietrovito.

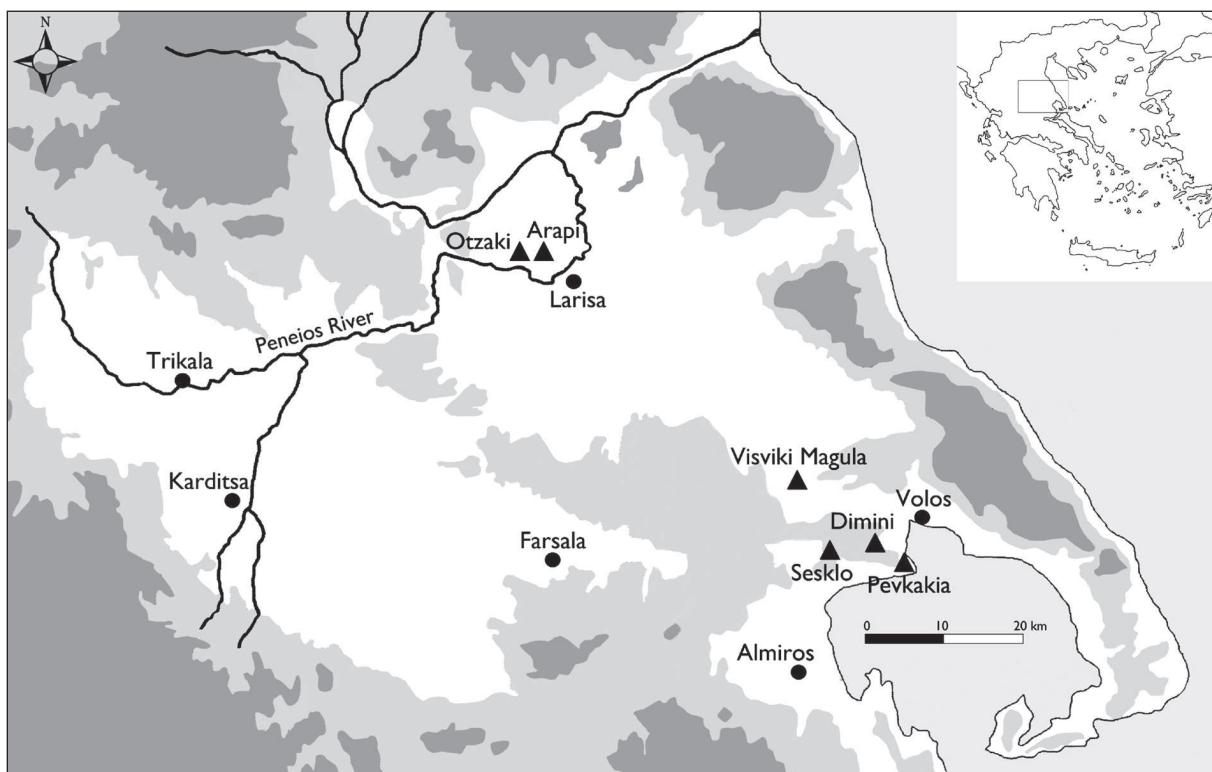


Fig. 1. Map of Thessaly referring to sites named in the text (graphic design: M. Frauenglas).

ματα, όμως, και η διακόσμηση της ιδιαίτερα πλούσιας πολύχρωμης κεραμικής της φάσης Αράπη έχουν κοινά χαρακτηριστικά κυρίως με την κεραμική από τη μαγούλα Πευκάκια στον Παγασητικό κόλπο, τα οποία δεν συναντά κανείς στο βορειοανατολικό τμήμα της θεσσαλικής πεδιάδας. Αντίθετα, η κεραμική της φάσης Διμηνίου διακρίνεται για την τυπολογική και στιλιστική της ομοιογένεια, η οποία παρατηρείται σε όλες τις περιοχές όπου απαντά η κεραμική Διμηνίου.

Η μελέτη των λίθινων λαξευμένων εργαλείων έδειξε ότι η διαδικασία της μείωσης του πυρήνα δε γινόταν στη μαγούλα Βισβίκη, αλλά ίσως στους παράκτιους οικισμούς του Παγασητικού κόλπου. Η επιτόπου παραγωγή εργαλείων περιοριζόταν σε μεγάλο βαθμό στη δευτερογενή επεξεργασία λεπίδων και φολίδων. Αντίθετα, η επεξεργασία των οστρέων *Spondylus* για την κατασκευή κοσμημάτων γινόταν στη μαγούλα Βισβίκη. Αυτό αποδεικνύει πως αυτό το τόσο πολύτιμο εμπορικό αγαθό παραγόταν σε πολλά εργαστήρια, σε επίπεδο μικρών νοικοκυριών.

The Neolithic settlement of Visviki Magoula, a small tell 6 m in height and with a diameter of 150 m, is situated in the Southeastern Thessalian plain northeast of Velesino, not far from Lake Karla (Fig. 1)¹. It has been known since the times of Tsountas and listed in the catalogue of sites by Wace and Thompson as no. 9². In the gazetteer of sites of the Eastern Thessalian plain Gallis published the site as no. 274 under the name Άγιος Γεώργιος Φερόν 3³.

1. By its size of about 2 ha Visviki belongs to the smaller Neolithic sites of Thessaly (Demoule & Perlès 1993, 370; Johnson & Perlès 2004).

2. Τσουντας 1908, 4 no. 9; Wace & Thompson 1912, 8.

3. Γαλλής 1992, 93-94.

Years BCE	Chronological subdivision	Important contexts and typological subdivision	Major pottery wares
3500	Early Bronze Age	Petromagoula	• Heavy Burnished Ware
4500	Chalcolithic Final Neolithic	Rachmani	• Crusted Ware
4500	Late Neolithic II	Otzaki B/C - Dimini	• Brown on Cream
4800		Otzaki A	• Incised • Black on Red • White on Red
5300	Late Neolithic I	Arapi	• Black on Red • White on Red
		Tsangli-Larissa	• Arapi Polychrome • Arapi Bichrome • Brown on Buff • Black Burnished
5800	Middle Neolithic	Sesklo I-III	• Red on White • Red Monochrome
6500	Early Neolithic	Sesklo A-B Argissa	• Early Painted • Monochrome

Fig. 2. Neolithic Thessaly: chronological chart.

In 1941 the site was excavated under the auspices of the “Sonderkommando Griechenland” (task force Greece) of the “Einsatzstab Reichsleiter Rosenberg”, Rosenberg being Hitler’s leading ideologue. The head of operations was H. Reinerth, Professor for Prehistory in Berlin and head of the “Office for Prehistory”⁴.

This institution was connected with the propaganda ministry, and the excavation results were published by them in its journal, the “Völkischer Beobachter” in 1942⁵. The principle finds, transferred to Germany by the excavators, were dated to the Late Neolithic Arapi and Dimini phases (Fig. 2)⁶. Furthermore, it included the layout of a “megaron” building.

Theocharis was intrigued by this building layout, and conducted a small excavation on the site in 1972. He included its plan in his book on Neolithic Greece as potentially the earliest example of a megaron in Greece, dating it to the Late Neolithic Arapi phase.

Therefore, it was probably not by chance that his friend V. Miložić asked his Greek student in Heidelberg, A. Dousougli, to take this most interesting material, which Germany returned to Greece in 1951 and stored in the National Museum at Athens, as the basis for her dissertation. In the nineteen-seventies, Angelika spent a year recording the pottery and other finds as well as studying the excavation plans. However, she discontinued her

4. Hiller von Gaertringen 1995, 482-483; Schöbel 2002, 321-396.

5. Benecke 1942.

6. For the chronology, see Alram-Stern 1996, 83-101; Alram-Stern 2004, 151-157; Maran 1998, 37-47.

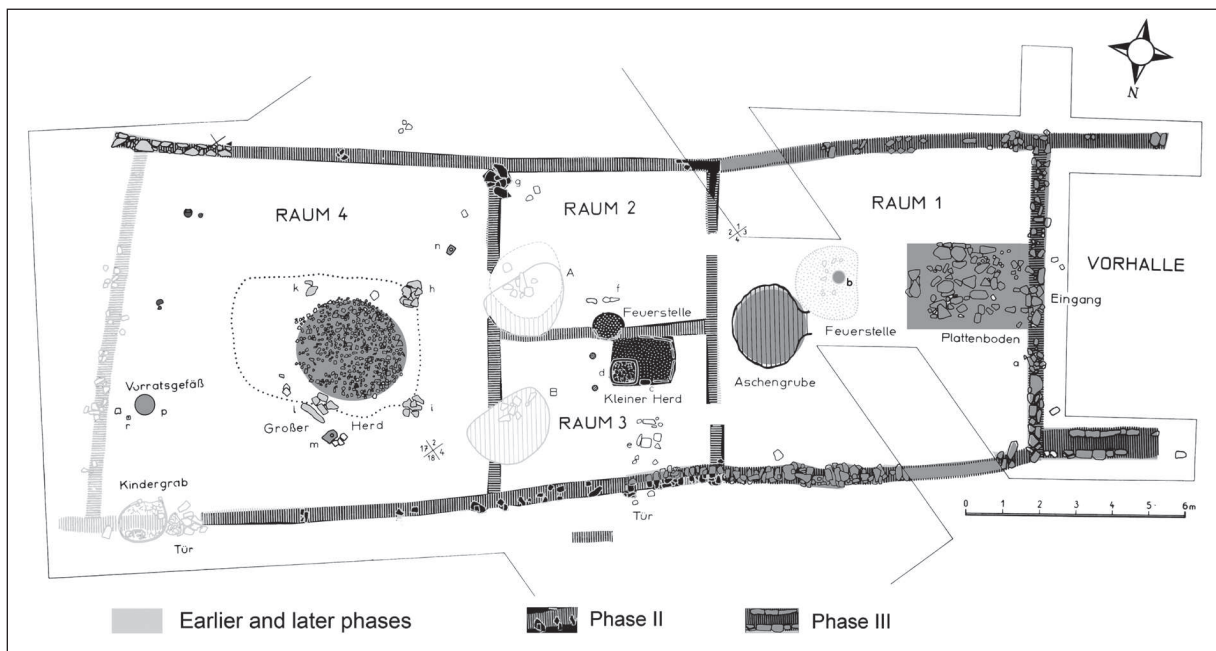


Fig. 3. Plan of the so-called megaron: two construction phases (graphic design: M. Frauenglas).

dissertation work in Heidelberg to rather complete her work on Aria in the Argolid⁷, which she had excavated during her first years in the Greek Service of Antiquities in the Argolid.

In 2004 Angelika invited me to cooperate on the publication of the Visviki Magoula finds. Since the time of her dissertation, our knowledge of the Third Reich's institutions and history has considerably increased. Furthermore, a more detailed plan was discovered in former East Berlin improving size estimates and the settlement sequence of the building remains⁸. In addition to this, further pottery and other objects were found in the storerooms of the Museum of Lake Side Dwellings in Unteruhldingen at Lake Constance, Germany, which complement the finds at the National Museum and have been returned in 2014. In 2009 a three year project was granted by the Austrian Science Fund, and the preparation for publication of the material has been carried through by a team of archaeologists, including a petrographer for pottery studies as well as an archaeozoologist⁹.

In the following I will give a short overview of the results of these studies. Due to time constraints, I will concentrate on the pottery. But first a few words on the new interpretation of the architecture and stratigraphy¹⁰:

A study of the excavation drawings labelled in German handwriting showed that the building remains of the so-called megaron actually belonged to several phases, which cannot be securely assigned to any particular layout (Fig. 3).

7. Ντούζουγλη 1998.

8. Hänsel 2001; Ντούζουγλη-Ζάχου & Alram-Stern 2006.

9. History of research: G. Schöbel and E. Alram-Stern; excavation: Trenches A and B: C. Dürauer; Area I: E. Alram-Stern; pottery: Middle Neolithic period: C. Dürauer; Late Neolithic Period: A. Dousougli-Zachos and E. Alram-Stern; petrographic analysis: A. Pentedeka; small finds: lithics: M. Bergner; objects of clay: E. Alram-Stern; bone tools: A. Galik; figurines: E. Alram-Stern and C. Dürauer; archaeobotany: F. Bertsch and H. Kroll; archaeozoology: A. Galik; graphics: M. Frauenglas.

10. Alram-Stern 2012, 75-84.

All in all the older building remains, which possibly date to the Arapi phase, consisted of mud brick walls on stone foundations as well as an assemblage around an oven.

The layout of these walls suggests small rooms of 5.70×4 m in size. Up to now no synchronous architectural remains have been published. But the small size of the rooms is reminiscent of houses found in Sesklo¹¹. The hearth itself exhibits strong parallels to Late Neolithic Dikili Tash¹².

The remains of the subsequent building phase, which are preserved on a higher level, are of stone, with the supposed mud bricks missing. According to the drawings they may have belonged to a larger building consisting of a sequence of rooms of more than 8 m in width. Such buildings are known from nearby Pevkakia Magoula¹³, as well as from Dikili Tash in Eastern Macedonia¹⁴.

A large hearth with a stone base is reminiscent of a hearth at Palioskala¹⁵. According to the pottery, this phase may date to the Dimini phase of the site.

In addition to this grid excavation, two trenches were excavated on the northern slope of the hill to a depth of 6.60 m with the recording of pottery finds by the half-meter. The two lowermost strata of trench A, which are situated above bedrock, produced red monochrome pottery dating to the latest phase of the Early Neolithic or the earliest phase of the Middle Neolithic, with good parallels to Middle Neolithic Sesklo. Since no earlier pottery has yet been recorded at the site it probably dates the foundation of the settlement. However, the pottery of the overlying levels is mixed and dates mainly to the Arapi and Dimini phases¹⁶.

Except for a few finds documented *in situ*, the pottery of the excavations on the top of the magoula was not recorded according to strata. Therefore, pottery from Visviki can only be dated in relation to published stratified material, which exists for the Middle Neolithic period¹⁷ and pre-Dimini phases of the Late Neolithic period¹⁸. However, for the Dimini, as well as the Rachmani phases, the established stratigraphy of the excavations carried through by Miložčić at Otzaki Magoula and Pevkakia Magoula and published by Hauptmann and Weißhaar is questionable, although typological tendencies are evident in the published material¹⁹. This stratigraphic problem results in that the transition from the Arapi to Dimini phase has not been explored. Furthermore, we know little about the continuities and changes, which may have taken place in pottery production and consumption during the Dimini and Rachmani phases.

After having sorted the material, we find that mainly decorated sherds and monochrome rim fragments of a certain size, all in all more than 3.000 pieces, have survived. As the assemblage demonstrates a great variety of patterns and shapes, we are left with a feeling of loss due to the fact that we know so little of their contexts. What can be done is to compare this material with already published material as an aid in the defining of characteristics of the Late Neolithic pottery of the Southeastern Thessalian plain in the area of Lake Karla.

Use of the site during the later phase of the MN period is attested by a few sherds. For the Tsangli-Larisa Phase just 95 fragments have survived. Most of them belong to black burnished ware; some are brown burnished²⁰. In contrast, only a few pieces are matt painted²¹. A similar proportion has been recorded by Hauptmann for Arapi Magoula and could point to a similar circulation of wares in the Southeastern plain²². Shapes are also similar to the material from Arapi Magoula, although exact parallels do not exist²³.

11. Kotsakis 2006, 212 fig. 3, 214 fig. 4.

12. Treuil 1992, 41-43, 45-48; Deshayes 1974.

13. Weißhaar 1989, 9-12; Andreou, Fotiadis & Kotsakis 2001, 546.

14. Κουκούλη Χρυσανθάκη 1994, 68-75; Andreou, Fotiadis & Kotsakis 2001, 572.

15. Τουφεξής 2003, 57.

16. Alram-Stern, Dousougli-Zachos & Dürauer 2015.

17. Mottier 1981. Kotsakis 2006.

18. Arapi Magoula: Hauptmann & Miložčić 1969.

19. Hauptmann 1981; Weißhaar 1989.

20. Wace & Thompson 1912, 17: Γ1α.

21. Wace & Thompson 1912, 17: B3ε.

22. Hauptmann & Miložčić 1969, 6.

23. Hauptmann & Miložčić 1969, 21-23.

Interestingly, one of the main vessel shapes, the carinated bowl²⁴, was mainly produced in a uniform size of 20 to 24 cm, while pots of similar shape dating to the subsequent period differ considerably in size.

About 450 pieces of pottery definitely date to the Arapi period. To them also belong two complete jars, the polychrome jar probably deriving from the room with the small oven, the second from the area northwest of the large hearth (Fig. 4a-c).

The characteristic pottery of this period has been defined by the stratigraphy of Arapi Magula²⁵ and confirmed by the excavations of Makrychori II²⁶. However, the published material is scant when compared with

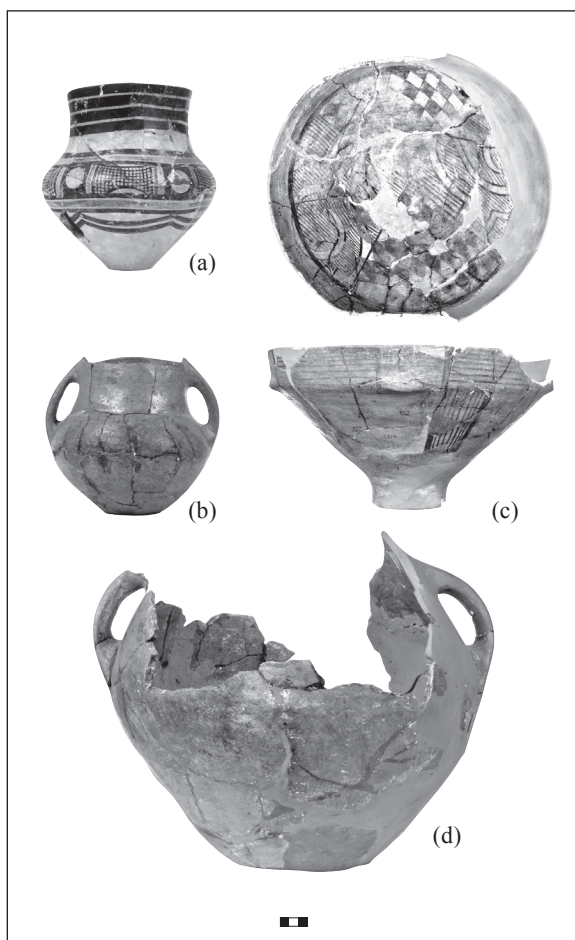


Fig. 4. Partially or totally preserved vessels:
a. Polychrome Black and Red on White painted jar (EAM 17353); b. Red monochrome jar (EAM 17361);
c. Black on Red painted bowl (EAM 17260);
d. Monochrome jar (EAM 15316)
(photos: K.-V. von Eickstedt).

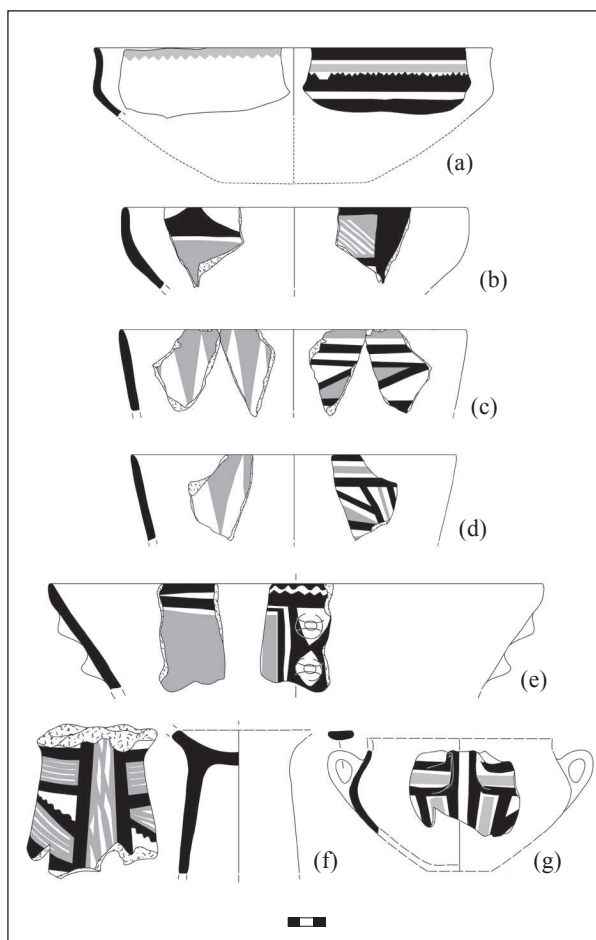


Fig. 5. Polychrome Black and Red on White painted pottery of the Arapi phase (EAM 16716, 16724.2, 16818.1+2, 16816, 16779, 16866, 16761)
(graphic design: M. Frauenglas).

24. Hauptmann & Milošević 1969, Beilage 1, 1-15.

25. Hauptmann & Milošević 1969, 49-76.

26. Demoule, Gallis & Manolakis 1988, 51.

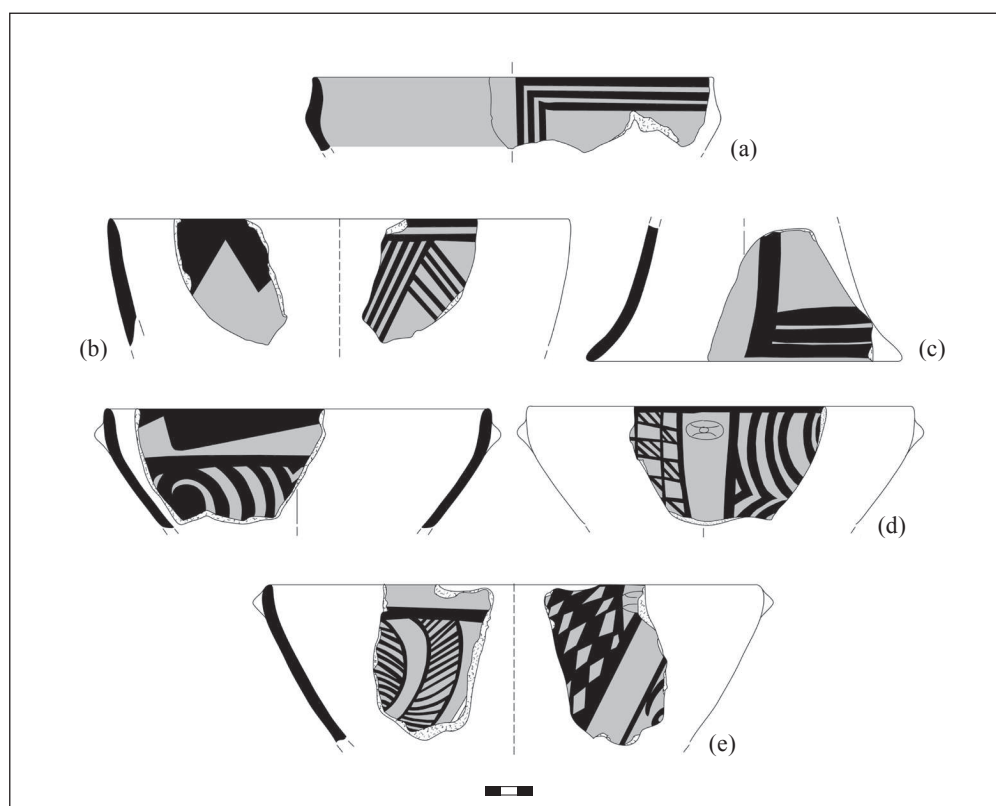


Fig. 6. Black on Red painted pottery of the Arapi and Dimini phases
(EAM 17005.1+2, 17031, 17078, 17081, 17034) (graphic design: M. Frauenglas).

Visviki Magoula. The majority of the collected pieces are pattern painted, all in all 218 belonging to the polychrome Red-and-Black-on-White Ware (Fig. 5)²⁷, 45 to the bichrome Black-on-White Ware²⁸, 5 to Red-on-White and 106 to the Black-on-Red Ware (Fig. 6a-c)²⁹ and 7 to the White-on-Red ware³⁰. The comparatively small amount of monochrome red burnished ware in the assemblage strongly suggests that a decision to limit the collection of this type was made by the excavators.

Penteteka examined their surface treatment techniques microscopically. According to her results, iron-rich slips were used for red colour decoration, while manganese-rich paints were used for the dark coloured (brown or black) decoration. All slips are fine-grained, probably as a result of fine levigation. Iron reduction technique is not attested in the Visviki pottery, as all dark decoration remained dark after refiring. Therefore, the decoration technique of Late Neolithic bichrome, brown on buff, and brown on cream wares consists of the application of a manganese-rich slip either directly on the surface of the calcareous body of the pot, or upon a calcareous slip covering the non-calcareous body. In polychrome decoration, alongside with the dark coloured manganese-rich decoration, reds are achieved via the application of an iron-rich slip upon the buff

27. Wace & Thompson 1912, 16: B3γ.

28. Wace & Thompson 1912, 16: B3α3.

29. Wace & Thompson 1912, 16: B3α2b.

30. Wace & Thompson 1912, 16: B3α1.

surface of the pot, be it slipped with a calcareous slip or not. Black on red ware equally shares the application of a manganese rich-paint on a surface, covered with a ferruginous slip³¹.

Concerning the polychrome pottery with red and black decoration on white slip it is interesting to compare the finds from Visviki with Arapi Magoula in the Larisa region and the few finds of the Arapi phase from Pevkakia Magoula at the Gulf of Volos³²: the carinated bowl and its decoration with hanging triangles, zigzag and festoon patterns (Fig. 5a) compares well with Arapi Magoula³³. However, there are certain differences in shape and decoration. First of all, the carinated bowls of Visviki Magoula have a less pronounced edge to their carination (Fig. 5b).

Most striking is the similarity with the Pevkakia assemblage in the shape of the deep bowl, which is rarely seen in Arapi Magoula, but abundant in Pevkakia Magoula, and not found at all in the Magoules of the area of Larisa. In Visviki Magoula, like in Pevkakia, the interior decoration of these bowls is characterized by long triangles, and the exterior is covered with linear designs (Fig. 5c-d)³⁴.

About 200 pattern-painted pottery fragments securely date to the Dimini phase. Furthermore, a carinated footed bowl with Black-on-Red decoration dating to the Dimini period has been found in grid 2. Black-on-Red Ware (Fig. 6d-e)³⁵, White-on-Red³⁶, polychrome ware with Black and White paint on Red surface³⁷, as well as Brown-on-Cream Ware (Fig. 7)³⁸, are well attested. In contrast to the Arapi phase pattern painted wares during this period are more or less restricted to bowls and fruitstands.

Pattern painted wares of this period are characterized by decoration covering the entire surface often consisting of spiraloid and maeandroid design. For the Black-on-Red Ware Hauptmann tried to differentiate an earlier phase he named Agia Sophia or Otzaki A phase from a later phase named Otzaki B³⁹. While pottery of the earlier phase is characterized by their execution in solid lines, pottery of the later phase is characterized by hatching or cross-hatching of the motifs. These two styles may possibly point to a stylistic development. However, in pottery material from Visviki several sherds actually combine both styles (Fig. 6d-e), so that such a chronological differentiation must be reconsidered. Furthermore, hatched decoration is often similar to motifs known from Brown-on-Cream Dimini pottery. This relation between those two wares must go back to their synchrony. Actually, although locally produced, Black-on-Red pottery is characterized by a more homogenous style within its distribution area than pattern painted Arapi pottery; a significant difference, if we consider style as a deliberate choice by the potters and users⁴⁰.

Brown-on-Cream Dimini ware is less frequent than Black-on-Red and must belong to one of the later uses of the site, since half of the sherds in the area of the “megaron” come from the surface layer. Striking is also the high fragmentation of this material in contrast to the other pattern painted wares of the Dimini phase. Furthermore, larger fragments are abundant in the uppermost layers of Trench B. All these facts point to a late date of the Brown-on-Cream Ware compared to other Dimini wares⁴¹. Again, Visviki gives no evidence for continuity of bichrome Arapi Ware and Brown-on-Cream Dimini Ware, which by its light, fine-grained fabric, standardized decoration and limitation of shapes points to technological specialization⁴².

Among the fragments of the Brown on Cream painted pottery is a fruitstand (Fig. 7). This bowl has an excellent analogy in the foot of a fruitstand in Pevkakia Magoula and demonstrates once again the close con-

31. Pentedeka 2015.

32. Weißhaar 1989, 55-57.

33. Hauptmann & Milojević 1969, Beilage 5.

34. Weißhaar 1989, pl. 1,3; 36,8.

35. Wace & Thompson 1912, 16: B3a2b.

36. Wace & Thompson 1912, 16: B3a1.

37. Wace & Thompson 1912, 16: B3b.

38. Wace & Thompson 1912, 16: B3a2a.

39. Hauptmann 1981, 14-24, 47-49.

40. For Makrygialos, compare Hitsiou 2003, 173f.

41. Hauptmann 1981, 50-61.

42. For a characterization of Brown-on-Cream pottery, Hitsiou 2003, 172.

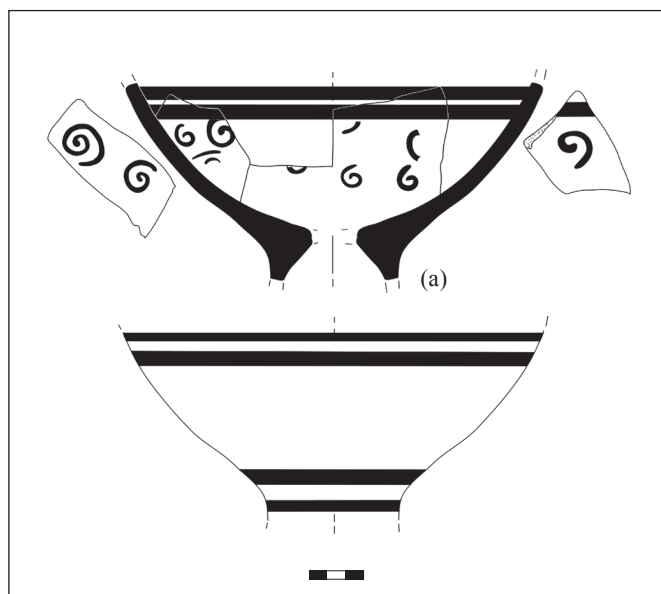


Fig. 7. Brown on Cream painted fruitstand (PMU 30881).

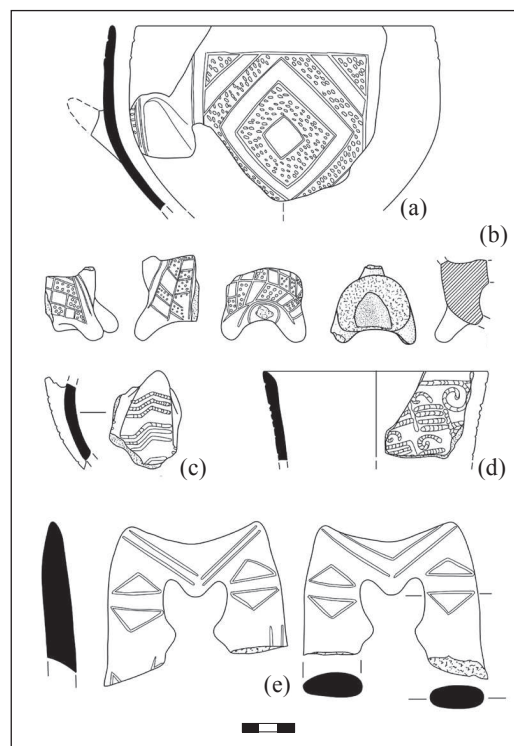


Fig. 8. Incised pottery of the Dimini phase (EAM 18095, 17281, 17241, 17250, 17237) (graphic design: M. Frauenglas).

nection of the site to the Gulf of Volos⁴³. That this design is common on pottery of the Dimini phase is proven by bowls with incised decoration⁴⁴.

58 sherds belong to wares with incised lines, often filled with white paste⁴⁵. Characteristically, although used for special shapes, the fabric of these wares is coarse. Some characteristic wares can be distinguished, among them pottery with incised motifs filled with small dots (Fig. 8a-b) known from Otzaki, Pevkakia and from Phthiotic Thebes as well⁴⁶. Furchenstich decoration (Fig. 8c-d) is known from Pevkakia Magoula as well as from Otzaki⁴⁷. These wares dating to the Dimini phase are widely distributed and need not be directly connected with Dimini as their production center. However, decoration in the form of thin incised lines seems to be closely connected to Dimini⁴⁸. In Visviki Magoula the characteristic shape attested in incised ware is the deep bowl with triangular lugs. Furthermore, an animal figurine possibly representing a turtle has been produced in incised ware (Fig. 8b). Other features are wishbone handles, which may have belonged to scoops with fine incised lines (Fig. 8e). Comparable handles were found in the Rachmani layers of Pevkakia Ma-

43. Weißhaar 1989, 146, pl. 2, 10.

44. Milojčić 1976, pl. 15, 13.

45. Hauptmann 1981, 63-74; Wace & Thompson 1912, 16: B2.

46. Compare Otzaki-Magoula: Hauptmann 1981, 278, pl. 80, 9; Argissa-Magoula: Hauptmann 1981, pl. 84, 9 (Otzaki A group); Pevkakia Magoula: Weißhaar 1989, pl. 29, 1, 6-7, 10, 12-16, 18-24; Phthiotic Thebes: Weißhaar 1984; Weißhaar 1989, pl. 88-89.

47. Weißhaar 1989, 194 pl. 58, 9.

48. Hitsiou 2003, 79-80, 170-171.

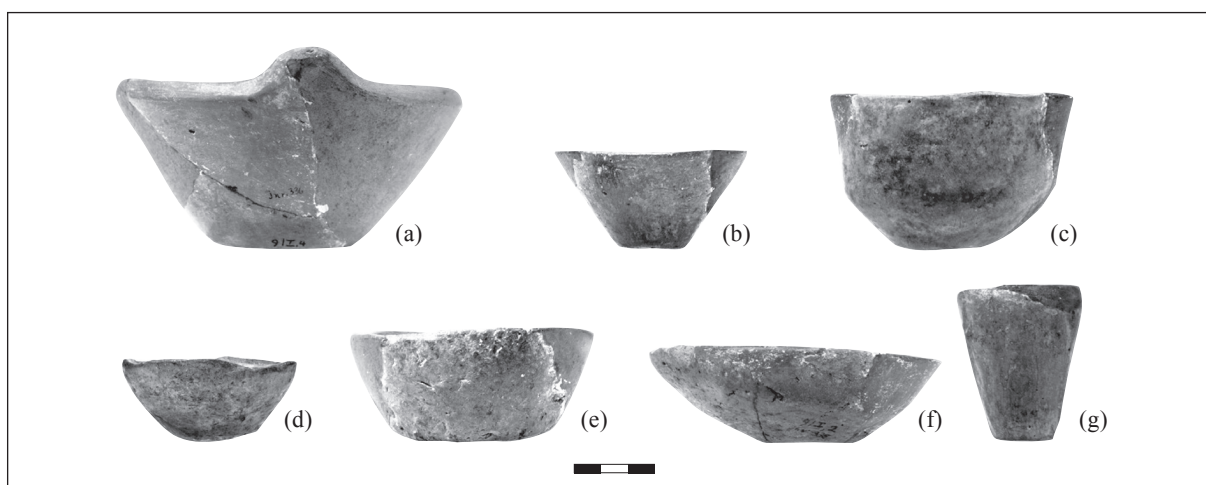


Fig. 9. Miniature bowls (EAM 18087, 18086, 18090, 18084, 18083, 18098, 18102) (photos: K.-V. von Eickstedt).

goula, but not at Otzaki Magoula, and have been attributed by Weisshaar to the Rachmani phase⁴⁹. However, this date is insecure.

Actually, only a few sherds definitely point to a use of the site during the Final Neolithic or Chalcolithic period of Thessaly as well as to the start of the Early Bronze Age. To them belong Crusted Ware bowls⁵⁰, spouted vessels⁵¹ as well as Rolled Rim bowls⁵² and so-called Cheese Pots⁵³.

The bulk of the monochrome pottery is burnished, has a red or brown surface and can only be assigned to a certain period by shape. About 150 pieces of them probably date to the Arapi phase. At least a third of them belong to shapes which were also produced in pattern painted wares. Therefore, these pots were probably used for eating/drinking/serving of food, the remaining mainly being used for cooking and storage. However, just 8 pieces of the same intended use securely date to the Dimini phase. Therefore, it seems that from the Dimini phase onwards the function of monochrome pottery changes⁵⁴.

To this assemblage also belongs a number of miniature vessels (Fig. 9), some of which are well preserved. Some of them have a well-burnished surface, but some have an untreated surface⁵⁵. Some of them clearly date to the Arapi phase, but out of context their use at the site remains an unknown.

Coarse pottery mainly comprises jars also found *in situ* (Fig. 4d). Furthermore, 50 fragments come from large-sized pithoid jars (Fig. 10a-c). According to the publication of Pevkakia Magoula, some of them could date to the Rachmani period⁵⁶. But since Dimini coarse wares are not well studied their dating remains insecure.

Coarse wares were in greater part collected in the area of the large hearth. This area also produced a number of so-called spit supports (Fig. 10d-f)⁵⁷.

49. Weißhaar 1989, pl. 14, 14, pl. 133 type 203.

50. Weißhaar 1989, 21-22.

51. Weißhaar 1989, pl. 136 type 235.

52. Χατζηαγγελάκης 1984, 80, fig. 3, 13-14; Adrimi-Sismani 2007, pl. XIIj.

53. Weißhaar 1989, 128 type 165; Alram-Stern, forthcoming.

54. For the same results in Makrygialos II, see Hitsiou 2003, 173.

55. For analogies at Makrygialos, Hitsiou 2003, 84.

56. Weißhaar 1989, 38-40, pl. 119-127 types 125-163.

57. Παππά & Nanόγλου, forthcoming.

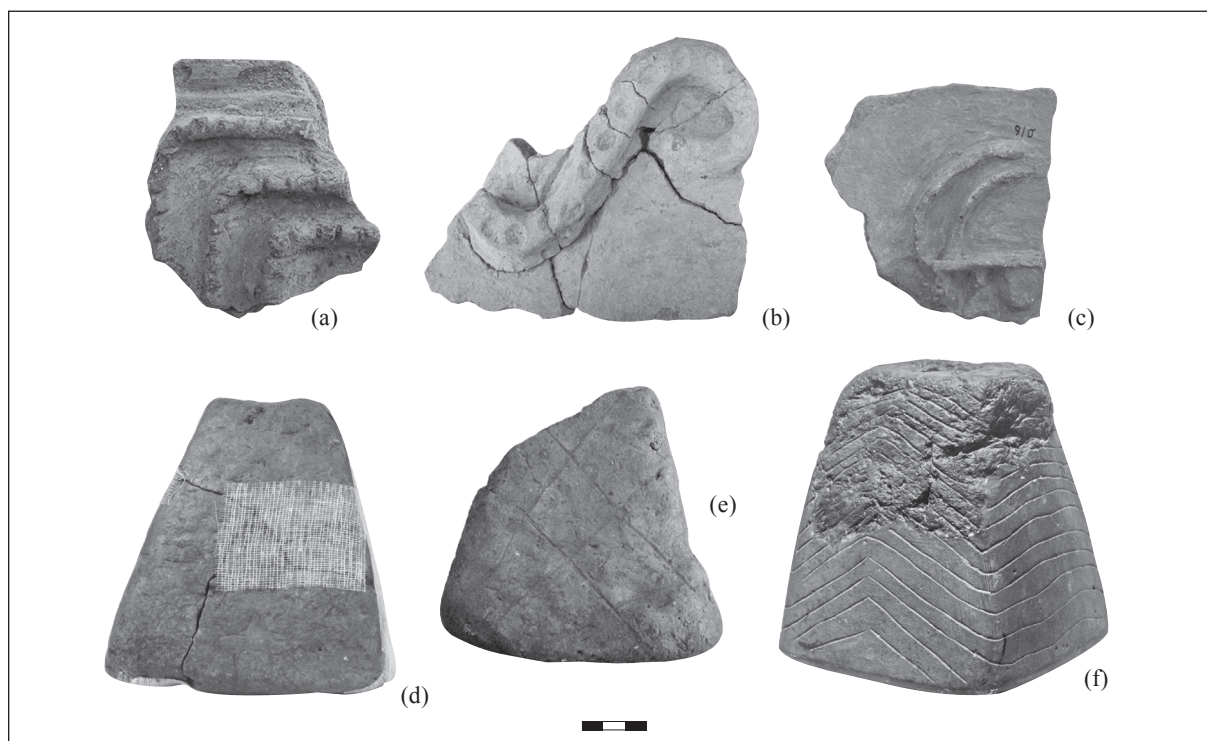


Fig. 10. a-c. Pithoid jars (PMU 28990, 28953, 28998); d-f. Spit support (EAM 17364, PMU 28998, EAM 17366, EAM 17370) (photos: K.-V. von Eickstedt, H. Dürr, E. Alram-Stern).

Petrographic analysis of over 100 samples of pottery and raw materials was intended to characterise local production through the examination of local fabric recipes, to explore the site's participation within pottery exchange networks through the identification of imports, and to shed light on various issues of pottery technology, in particular that of surface treatment techniques for decorated wares. The results show that the majority of the samples studied can be considered as locally made, matching well with the local raw material sources. A few samples bear a fair resemblance to North-eastern Thessaly fabrics, while a small number of samples resemble strongly pottery analysed and considered as locally produced in the Dimini area⁵⁸.

The German excavators were eager to collect stone and bone tools. Therefore, more than a hundred celts, axes and adzes, which were produced from material available in nearby streams, as well as grinding stones, pounders and rubbers, mace heads, sling bullets and arrow heads were collected⁵⁹. In addition to these, spindle whorls, spools and worked sherds were collected.

At the site about 500 chipped stone tools were collected. 80% of them were made of Melian obsidian, while 18% were made of brown flint with its source in the Pindos mountains. This proportion resembles the results given for Dimini⁶⁰.

58. Hitsiou 2003; Pentedeka 2015.

59. Bergner 2015.

60. Karimali 1994, 355-387.

Nothing points to a major production of chipped stone tools in the excavation area of Visviki Magoula. This fact may prove Karimali's theory that the chipping of obsidian was carried out by specialists and mainly took place in coastal areas from which inland sites were supplied⁶¹.

Bone tools include points and scrapers made from long bones, as well as tools of antler. Mollusk shells were used for decoration⁶². Among them are spondylus shells well known for their distribution as far as Central Europe. At Visviki, a production of shell rings and other decorative elements is attested. This means that not only coastal sites were involved in the production of spondylus objects. Furthermore, the evidence of Visviki may prove that spondylus was worked in a variety of places, including households⁶³.

Little evidence for subsistence is preserved. To them belongs a manuscript by F. Bertsch, which reports on barley, einkorn wheat and emmer as well as acorn from the area of the small hearth⁶⁴.

A small assemblage of animal bones, mainly sheep/goat and cattle confirms the picture of animal husbandry for this time. Furthermore, a tuna bone and various shells demonstrate that salt water fish and seafood also reached Visviki Magoula at Lake Karla⁶⁵.

Therefore, Visviki Magoula situated at the southern edge of the Eastern Thessalian plain was closely related to the seaside settlements at the Gulf of Volos, as evidenced through food stuffs, tools and raw materials. Analogies in pottery also point to close connections on a social level. On the other hand, petrographic analysis demonstrates that the site was also part of a network which interacted with areas further North in the Eastern Thessalian plain.



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61. Karimali 2000, 15; Καρίμαλη 2001.

62. Galik 2015a.

63. Tsuneki 1987; Halstead 1993, 604, 608.

64. Bertsch & Kroll 2015.

65. Galik 2015b.

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