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ANNABLUME

“<Μέλι> πρωτεύει τὸ Ἀττικὸν καὶ τούτου τὸ
᾿Υμήττιον καλούμενον” HONEY PRODUCTION
IN ATTICA, AN ANTIQUE EXCELLENCE

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ABSTRACT: Honey, like salt, wine and oil, is one of the main foods of the ancient world: it has been, since prehistoric times, the most used sweetener in the Mediterranean. In this basin, in fact, there are several areas of production, but, among these, one of the most famous is certainly the area of Mount Hymettus in Attica. Famous in antiquity, Hymettus honey is a production of excellence that is still much appreciated. Some interesting discoveries, since the 70s, allowed the archaeological validation of literary sources, highlighting places of production active from the classical to the Byzantine period. Index Fossil of these investigations are clay beehives, mainly horizontal, preserved in many sherds that are not always easy to identify.

Thanks to the pioneering research of J. E. Jones and the great encyclopedic work on beekeeping of E. Crane, serious attention has been paid over the years to the findings that could suggest honey production in areas that are particularly significant such as Attica, but a work that gathers all the information available, especially those of the most recent excavations related to major projects such as the Athens metro and the construction of the new airport at Spata, near Mount Hymettus, has been lacking. This article aims to offer an overview of the honey production sites in the city of Athens and Attica, identifying the geographic areas most affected by the phenomenon and the different chronological periods. This paper aims to also investigate the ancient production technique, thanks to the comparison with other traditional areas of production and several contemporary examples from neighboring islands such as Andros and Naxos.

KEYWORDS: Archaeology of production, Honey, Attica, Athens, Mount Hymettus

I. INTRODUCTION

Honey – like salt, wine and oil – is one of the main foods of the ancient world: it has been, since prehistoric times, the most used sweetener in the Mediterranean; sugarcane, in fact, took its place only during the Arab domination in Spain in the eighth century. Honey has always played a vital role in human life, and its nutritional characteristics and its natural origin made it eligible to be employed in various ways, in culinary, medical and cosmetic fields¹, not to

¹ See the diagram in Bortolin 2008: 17.

mention that its production is associated with wax, essential for several activities, from embalming to sealing, painting and weaving².

As a sweetener, honey appeared both on modest and richer dinner tables, sometimes as a real sweet in the form of honeycomb³; it was used in several dishes of fish and legumes, was an important ingredient in sauces and seasonings⁴ and was obviously used in various fruit jams⁵.

1. 1 Quality and economic value of honey

Honey could be distinguished according to the quality, depending on the different seasons, and the methods of harvest. Classical⁶ and Byzantine⁷ sources tell us that the periods for the collection were spring (May to June), summer (July) and autumn (September to October), when the honey matures perfectly, about forty days after the equinoxes⁸. Thus spring (μέλι ἐαρινόν in Aristotle, or *vernum anthinum* in Pliny) and summer (or ὥραιόν, *aestivum*) honey are obtained; summer honey was also mentioned by Pliny as particularly suited to medicines⁹.

The type of harvest, however, allowed a distinction between honey of first or second quality, obtained from the spontaneous dripping of honeycombs (the so-called virgin honey) or by squeezing them¹⁰. Depending on whether or not the fumigation was used to facilitate the collection of combs, honey could absorb the smell of smoke or maintain its flavor, which according to Strabo made it much better¹¹.

This distinction of the two qualities is known in ancient Egypt, where it was customary to indicate the quality of the honey on the pots that contained it¹², distinguished on the basis of color and purity. These criteria are also followed by classical authors who often specify, for example, how the amber color and the fluid density of the product are an indication of richness¹³.

² Chouliara Raïos 1989: 165-192. For the pre-classical sources that talk about honey's exploitation and its symbolic value, see Bortolin 2008: 18-22.

³ Petron. 35, 5. *Ov. Met.* 8, 673-677.

⁴ *Apic.* 1, 29-31.

⁵ *Colum.* 12, 47, 3. See André 1981: 189.

⁶ In particular, *Arist. HA* 5, 22, 553b-554a; *Arist. HA* 9, 40, 626b; *Colum.* 9, 14, 10; *Plin. Nat.* 11, 14, 34-37.

⁷ *Gp.* 15, 5, 1.

⁸ Bortolin 2008: 33.

⁹ *Plin. Nat.* 11, 15, 38.

¹⁰ See *Colum.* 9, 15, 12-13; *Plin. Nat.* 11, 15, 38.

¹¹ Μέλι ἀκάπνιστον or ἄκαπνον, *Str.* 9, 1, 23. See also the *acapnum* honey of *Plin. Nat.* 11, 15, 45 and *Colum.* 6, 33, 2. Lucian called it ἄπυρον instead (*Nav.* 23).

¹² To the Thutmosi III period belongs a stamp with four bees that signals honey quality, see Crane 1999: 165; while two small jars from Tutankhamon's tomb were stamped with the symbol for good quality honey, see Forbes 1966: 85.

¹³ Aristotle establishes the different sorts of honey according to sweetness, color and taste

To all these qualities of honey corresponded different uses and market needs. A sacred law of the early fourth century BC¹⁴, designed to establish the tariffs for the sacrifices, seems really interesting, since it shows that a κοτύλη of honey costs three obols. However, it is difficult to understand the economic value of this product before the crucial Edict of Prices of Diocletian (301 A.D.), which tries to regulate the sale of honey distinguishing between first and second quality: Mellis optimi Ital(icum) s(extarium) unum X qu[adragesima] / Mellis secundi Ital(icum) s(extarium) unum X big[inti quattuor] (Edict. Diocl. 3, 10-11). Given the wide variety of honeys and the amount of countries producing it, it is likely that the economic framework was more complex than this, but the diocletian price list can still help to give an idea of the distinctions of the market.

1. 2 Honey in Attica

A country that, already in antiquity, distinguished itself in the production of honey through quality and quantity is certainly Greece, in particular the region of Attica, from which came one of the most famous honeys of antiquity: that of thyme of Mount Hymettus¹⁵. Equated only with the Sicilian honey from Ibla, it was celebrated by numerous classic authors¹⁶ for its extraordinary sweetness and intense aroma, even becoming the subject of proverbial expressions¹⁷.

This considerable literary resonance is archaeologically confirmed by the many hives found in the area of Hymettus and elsewhere in the region, finds that identify the traits of a beekeeping activity rather established as early as the fifth century BC. Beekeeping probably represented one of the most profitable and more widely practiced rural activities, if the same Solon¹⁸ introduced legislative measures that regulated the distances required between apiaries, so that each beekeeper could exploit the water resources of the territory¹⁹. According to Rostovtzev, the presence of large and small hives should have been even one of the distinctive features of the rural landscape of

(*HA* 5, 22, 554a; *HA* 9, 40, 626b–627a). Pliny identifies them instead according to the countries of origin (*Nat.* 11, 14, 33). Columella, in the end, uses the criterion of the different plants and flowers that produce honey (9, 4, 6–7).

¹⁴ *IG*. II², 1356. See Bortolin 2008: 34.

¹⁵ The sources mentioning it are endless. Among others, see Colum. IX, 14, 19; XX, 26, 68; Ov. ars II, 517; III, 150; Sil. XIV, 26; Petron. XXXVIII, 3; Mart. V, 37, 10; IX, 11, 3. See André 1981: 187.

¹⁶ Plin. *nat.* XI, 13, 32; Paus. I, 32, 1.

¹⁷ Mart. V, 37, 10. The Hymettian thymus was so appreciated that they tried (unsuccessfully) to acclimatize it elsewhere, see Plin. *Nat.* XXI, 31, 57.

¹⁸ So Plutarch tells us, Plut. *Sol.* XXIII, 6–8.

¹⁹ Bortolin 2008: 43.

Greece and honey was one of the most valuable assets of Attica, circulating, like oil and wine, in the markets of the Mediterranean²⁰.

In order to better understand the phenomenon of beekeeping activity in the most famous honey region of classical antiquity, this paper presents a catalogue of all the available data regarding clay beehives, extension rings and lids found in old and recent excavations around Attica. Considering the importance of this rural production, both in ancient and modern times, the overview of this work has to be one of *longue durée*, taking into account finds dating from the Early Classical Period to the Late Antiquity. The aim of the paper is thus to build a ‘topography’ of honey production in the Attic region, analyzing the archaeological data at our disposal with an eye to ancient sources.

2. HORIZONTAL BEEHIVES

Almost all of the archaeological data available to rebuild a ‘topography’ of honey production in Attica relates to the terracotta hives²¹: from the moment they were recognized for the first time in 1959 at the fortress of Justinian in the Isthmus of Corinth²², they have been identified in various geographical areas of Greece, within a very wide time span, from the fifth BC to the XIII century A.D.²³

A first type, to which refers the largest number of findings, is the horizontal fixed comb beehive, with an oval-shaped, relatively long body (average 40-60 cm) that tends to shrink towards the end, with a wide mouth (diam. 30-40 cm) with everted and thickened edge and flat or rounded bottom. The inner walls generally present furrowed lines, obtained before firing with a sharp instrument; they may develop horizontally to half the circumference or vertically, from the rim to the base, or be arranged in parallel or crossed bands. These lines allowed greater adherence of the hanging honeycombs and

²⁰ Rostovtzev 1980: 284. That it was present in the eastern markets and was exported from the markets of Athens as a luxury good is indirectly proved by a papyrus in the archive of Zeno (P. Cair. Zen. 59012, 22-29), quoting the Attic one amongst imported honeys; the archaeological evidence that has so far emerged, however, does not confirm this information, because containers of this specific honey or any inscriptions have not been found, see Bortolin 2008: 43.

²¹ By far the worst according to ancient writers, since they didn't keep constant temperature and were cold in winter and hot in summer (Varro rust. III, 16, 16-17; Colum. IX, 6, 1-4), but clearly the only extant because durable. Much preferred were those of wood, wicker and splint (Colum. IX, 6, 1-4; Plin. Nat. XXI, 47, 80). Recently, however, a study has shown through chemical experiments the groundlessness of this aversion, as temperatures reached from the terracotta hives would be perfectly in line with what is normally borne by bees (but this was obviously more difficult to prove for the ancient authors), see Francis 2012.

²² Broneer 1959.

²³ Bortolin 2008: 69.

therefore indicate the upper side of the hive²⁴. The hive could be extended through the application of extension rings, characterized by a low ring shape (h. 6.5-7 cm, diam. 32-40 cm), with the ends facing outwards and slightly swollen, to form supporting surfaces; also in this case, it is possible to find crossed lines, except for the entire internal circumference. Also terracotta lids can be found, circular in shape, broad and flat (h. 1.5-2 cm, diam. 33-40 cm), with the inner surface smooth and the outer decorated with concentric circles in relief, used probably as reinforcements. At the opposite limits of the edge, there can be found small half-moon shaped bumps, before which two or three small holes (diam. 2 cm) line up, while one appears isolated in the middle. At one point of the edge it is also possible to identify a small oval opening.

The operation of the system to which extension rings and lids could be applied to the beehive was studied by M. I. Geroulanos on some fragments found in Trachones²⁵. Based on ethnoarchaeological comparisons (figs. 1-3), he showed how the extension rings were inserted between the body of the hive and the lid to facilitate the production of the best quality honey, increase and facilitate its harvest without resorting to fumigation or limiting its use extensively²⁶. The hives could be closed with lids blocked by a small, two-pronged stick, externally fixed with a string passing through the central hole and crossing through the lateral ones; bees could thus enter and exit through the opening in the underside of the lid²⁷.



Fig. 1 – Modern clay beehive, still in use on Syros island

²⁴ Interpretation proposed by Demetrios Pallas through ethnoarchaeological comparisons, Broneer 1959.

²⁵ Jones, Graham, Sackett, Geroulanos 1973: 443-444. About Trachones, see *infra*.

²⁶ Jones 1990: 69-71. Precisely in this function may reside, according to Jones, the reason why the extension rings' furrowed lines run along the entire circumference: not having to worry about the right positioning, the beekeeper could place the rings more quickly, thus avoiding being bitten.

²⁷ Bortolin 2008: 70.



Fig. 2 – Beehives in use until the '50s on Naxos island



Fig. 3 Clay beehive with a schist stone used as lid, Naxos

2. 1 City of Athens

2. 1. 1 Agora

The oldest examples of hives found in the Agora of the Kerameikos date from the late fifth century BC: an almost entire vessel, in the form of a *kalathos*²⁸, and a fragment of rim and foot²⁹; all elements have been found in wells, used as dumps.

Six hives of the Hellenistic period, however, are preserved in conditions sufficiently favourable to be completely rebuilt, but several other fragments were found³⁰. The oldest are the fragments PP 20506 and 28146 - which date from before 275 BC - but the greater spread of these ceramic containers is in the deposits of the Late Hellenistic Period, in which it is possible to find at least one fragment in every dump³¹. Beehives were also found in deposits of Late Republican Period³²; among these, it is interesting to note that the find P 7976 lacks at all the inner scratches, an absence that is also noticeable in modern hives: the lack of this feature makes the fragments of this kind almost impossible to identify and this could explain the total absence of hives in the later Agora's deposits³³.

On some fragments engravings were noted³⁴: the letters engraved after firing counted probably as marks of possession, something that helps us to understand how busy hives would have had a decent value. The fragment with stamp P 7189 could come from a beehive (the diameter is compatible and the rim resembles that of other pieces inventoried): it was not found in a closed context, but the fact that the name Biottos - here printed inside, odd choice if it is the symbol of a producer - never appears in Roman Athens, but only between the fourth and the first century BC, suggests that it is Hellenistic.

In contrast to the large number of hives, a few extension rings were found in the Agora: only four fragments, two of which are catalogued. The explanation usually offered for the use of the extension rings could also ex-

²⁸ Sparkes, Talcott 1970: 217-218; 366, n. 1853, pl. 88. See also Lüdorf 1998/1999: 84, B1. The nomenclature appears in Corbett 1949: 335, n. 95 for the first time and is taken up by Jones et al. 1973 instead of terms taken from the modern world for semi-analogic forms (the most common is *umbrella stands*). These vessels are not of the same shape of the purified clay *kalathoi*, but the shape is reminiscent of the old basket used to spin and called *kalathos* in Richter, Milne 1935: 13.

²⁹ Lüdorf 1998/1999: 84, B2.

³⁰ 16 Hellenistic specimens catalogued, 46 in total in deposits (Rotroff 2006: 124).

³¹ See for example P 5824, Rotroff 2006: 284, n. 364.

³² P 21772, Rotroff 2006: 284, n. 365, in excellent condition. Of the Late Republican/Early Imperial Period is also the lid P 22091, Agora V: 35, n. G124.

³³ Rotroff 2006: 127. Whereas late antique beehives were found in other areas of the city, such as the Kerameikos (cfr. *infra*).

³⁴ P 20491, Rotroff 2006: 128; 284, n. 363.

plain this lack of discoveries³⁵: the harvest of a refined honey, at a given time of the year when only a few plants were in bloom, was probably impossible within the city, where the bees were quite far from certain types of pollen³⁶.

In the Agora seven lids (around 23 fragments are stored in warehouses) were brought to light, characterized by highly uniformed sizes and diameters which are very close to those of the hives.

The presence of a large number of hives and their covers (71 pieces in total), in an urban area probably densely populated, is explained by the excavators with the presence of different ceramic workshops, producing crockery also of this type, or with the spread (at least at the end of the fifth century BC) of beekeeping even within city limits; the latter, moreover, is placed historically in the context of the Peloponnesian War when, because of the numerous spartan invasions in Attica, the Athenians lost the ability to access their farms and so brought their hives into the city³⁷.

2. 1. 2 Kerameikos

On the small southern hill of the Kerameikos, the excavations carried out from 1960 to 1963 by the Deutsches Archäologisches Institut in Athens have uncovered two tombs of the Hellenistic Period consisting of *enchytrismos* in clay hives: for the first³⁸ (HW 136) a small hive with lid was reused, very well preserved, while the second was created using a taller vase, without lid, with an incision on the bottom and one on the outside wall, almost certainly an indication of quantity³⁹.

2. 1. 3 Evangelismos Subway Station

During the excavation of the Evangelismos subway station, in June 1995, the Eforia unearthed a narrow strip of land to the north of the Rizari Park and south of Vassilis Sophias Avenue, characterized by a clay pipe, a cemetery and an industrial area; three furnaces, in particular, dated by the finds at least to the second half of the second century BC, have yielded a considerable amount of fragmentary and semi-complete hives⁴⁰.

³⁵ See *supra*. See also Rotroff 2006: 128.

³⁶ Rotroff 2006: 128. Larger groups of extension rings, however, have been found in other areas of the city - five in a deposit of the third century BC at the southern slopes of the Acropolis, see N. Vogeikoff, *Hellenistic pottery from the South slope of the Acropolis*, 1993 (doctoral thesis, Bryn Mawr College) - hence their absence from the Agora could also be accidental.

³⁷ But the fact that also perishable materials were certainly used in antiquity for the creation of hives - and these were considered better by ancient authors, see. Colum. 9, 6, 2; Varro Rust. 3, 16, 17 - makes it impossible to say with confidence that before that date there weren't already apiaries within the city walls.

³⁸ Knigge 1976: 166, n. 397.

³⁹ ΦΙ interpreted as a 60, Knigge 1976: 166, n. 398.

⁴⁰ Lygouri-Tolia 2000: 212.

2. 1. 4 Syntagma Subway Station

During the excavation of the Syntagma subway station – one of the most extensive excavations ever made in Athens⁴¹ – on the west slope of the low hill known as Aghios Athanasios or Aghios Thomas, a complete clay beehive was recovered (fig. 4), characterized by a couple of metal restorations around the lip, probably already made in antiquity. The beehive is dated by the excavators to the Late Republican/Early Imperial Period (first century BC – first century AD), dating that could also explain the apparent lack of inner scratches⁴².



Fig. 4 – Terracotta beehive from Syntagma Metro Station excavations, first century BC - first century AD

2. 2 Imetto's area

2. 2. 1 Vari House

The most famous discovery of hives and other equipment necessary for beekeeping is surely linked to the ancient country house below the Cave of Pan in Vari. The house, at the southern slopes of the massif of Mount Hymettus, was excavated in the summer of 1966 by a joint mission of the Eforia and the British School at Athens, while the excavation reports and finds were published in 1973⁴³. In a long article, great attention was paid to the so-called combed ware, characterized by the ‘combing’ of the ceramic surface. This group includes twenty-three pieces of coarse *kalathoi* and twelve

⁴¹ Zachariadou 2000: 149.

⁴² The vessel is on display at Syntagma station, but apparently not published. The context in which it was found is also unknown: because of the dating and the shape of the beehive, also through comparisons with similar contexts such as the Kerameikos or Marathon, it is possible to propose a provenance for this vessel from the extensive roadside cemetery, in continuous use from the 4th c. BC to the early 3rd c. AD, that developed alongside the northern verges of the road leading to the Mesogeia, today underneath Amalias Avenue (see Zachariadou 2000: 156-157).

⁴³ Jones, Graham, Sackett, Geroulanos 1973. See also Jones 1976.

fragments of clay rings with horizontal combing. In the same area also nine fragments of ceramic lids were found.

A dating to the Early Hellenistic Period for the hives has been proposed – the period of occupancy of the house – and concerning their accommodation, diggers have speculated that part of the land of the property was used as an apiary, where several hives were piled, stacked horizontally in a kind of wall, held close by a thick layer of mud (good insulator from cold and hot temperatures) and possibly sheltered by a small shed⁴⁴.

2. 2. 2 Trachones

Excavations conducted since 1952 in Trachones⁴⁵, about 5 km south of Athens, between the western side of Hymettus and the sea, revealed several sites, including an interesting farming settlement, perhaps connected with a sanctuary of Athena. The first phase of this structure belongs to the fifth and fourth century BC, the second – and best preserved – to the Hellenistic Period, from the third to the first century BC.

In the levels of the fourth century and later, several fragments of common pottery attributable to the type of the horizontal hive were brought to light⁴⁶. From the same area fragments of three clay rings and an almost complete lid were also recovered.

2. 2. 3 Ilioupoli

Some fragments of pottery characterized by internal scratches were identified on Mount Hymettus, southwest of Athens⁴⁷. These are wall fragments and the dating is uncertain⁴⁸.

2. 2. 4 Vathy Pigadi and Spata

Excavations carried out in a workshop area (fourth to second century BC) in Vathy Pigadi, in the northern area of the airport, near the road leading to Loutsas, have uncovered a complete hive (fig. 5) and a clay lid (fig. 6) with the inscription of the name of the owner, EMBIOY. Also from nearby Spata comes also a fragment of beehive later reused as a sarcophagus for an infant (fig. 7) and an incomplete lid (fig. 8), both of the Early Byzantine Period⁴⁹.

⁴⁴ Jones, Graham, Sackett, Geroulanos 1973: 443.

⁴⁵ Jones, Graham, Sackett, Geroulanos 1973: 443-448.

⁴⁶ It was possible to obtain an almost complete vessel through restoration, characterized by the typical combing (horizontal and vertical) up to at least a third of the circumference.

⁴⁷ Varoucha-Christodoulou 1961: 335, n. 11, fig. 6.

⁴⁸ Lüdorf 1998/1999: 130, BW 94.

⁴⁹ The finds are on display at the museum of the airport, but apparently unpublished. Brief notes about the finds can be seen in Steinhauer 2002: 98-99 and Gini-Tsofopoulou 2002: 165, fig. 17.

“<Μέλι> πρωτεύει τὸ Ἀττικὸν καὶ τούτου τὸ Ὑμήττιον καλούμενον”
Honey production in Attica, an antique excellence



Fig. 5 – Clay beehive from the Airport Excavations, Vathy Pigada, IV-II century BC



Fig. 6 – Clay lid with the name of the owner, Vathy Pigada, IV-II century BC



Fig. 7 – Fragment of beehive reused as a sarcophagus for an infant, Spata, Early Byzantine period



Fig. 8 – Fragment of clay lid, Spata, Early Byzantine period

2. 2. 5 Myrrhinous

Excavations conducted in the area of the Markopoulou airport of Athens, in the ancient deme of Myrrhinous, brought to light a likely apiary in the so called Southeastern Farm⁵⁰; in its rooms, several clay sherds of beehives were recovered, among which a wall sherd and a lid with interesting stamps stand out: the decorated stamps report the name of the likely manufacturer, Biottos, who is already known from a stamped sherd from the Agora of the Kerameikos⁵¹ (fig. 9), and thus authorise a dating to the third or second century BC.

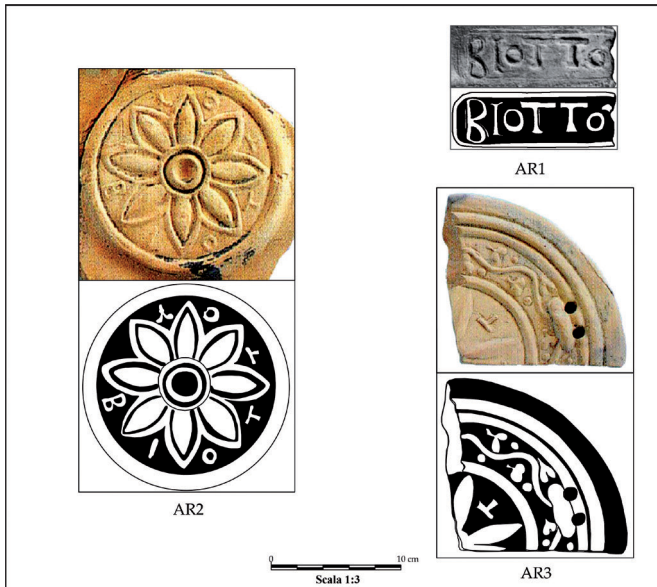


Fig. 9 – Wall (AR 2) and lid sherd (AR 3) with stamps of the name of the likely owner, Biottos, known also from the Athenian Agora (AR 1), Myrrhinous, III-II century BC (from De Domenico 2015)

2. 3 Eastern Attica

2. 3. 1 Koroni

In a Ptolemaic camp, in eastern Attica, a high container with a flat bottom and internal scratches, defined by the excavators *umbrella stand*⁵² but definitely a horizontal hive⁵³ was found. The place of discovery is the so-called House C, perhaps the home of the guardian of the camp, and its presence in this

⁵⁰ Anetakis, Markou 2003: 52.

⁵¹ See *supra*. See also De Domenico 2015.

⁵² Vanderpool, McCredie, Steinberg 1962: 38, n. 46.

⁵³ Lüdorf 1998/1999: 104/105, BB 22.

context has been explained with the storage of water reserves⁵⁴, but, due to the lack of definitive elements, the question has to remain open.

2. 3. 2 Philaidai

A 1981 survey in the area west of the Basilica, in the deme of Philaidai near Brauron, revealed, thanks to the ploughing of the land, several ceramic fragments, enough to recreate at least a beehive and an extension ring⁵⁵.

2. 4 South-eastern Attica

2. 4. 1 Princess Tower, Sounion

In September 1972, J. E. Jones went to the hills 2 km north of Cape Sounion, on the southeast flank of the lower valley of Agrileza, to observe a complex consisting of a tower and a courtyard, identified already with the investigations of J. H. Young⁵⁶ and the American School of Classical Studies as the center of a working farm and dated, in two different phases, to the late fifth century and the II/I century BC. On that occasion, four fragments of combed ware were identified: a fragment of rim, two fragments of wall and a fragment of an extension ring. These fragments, identified by Jones as elements of terracotta hives and extension rings, would seem to add texture to the hypothesis of Young in identifying a small farming center on the site. In particular, the recognition of a fragment of extension ring in this area is particularly striking, being close to the silver mines, where Strabo placed an excellent production of ‘not smoked’ honey⁵⁷.

2. 4. 2 Thorikos

During several excavations of the Belgian mission in Thorikos (1963, 1969 and 1977) a large extension ring (TC 69,284) and fragments of two horizontal hives almost entirely reconstructed (TC 63168 and TC 77.95) were found from different areas of the Velatouri Hill: the ring comes from the western Insula 3 of the industrial district (south-western slope of the hill), from the filling of a pit with finds of the fifth century BC⁵⁸; the first vessel was found along the wall B⁵⁹, while the second was found to the North of the *analemma* wall of the theater⁶⁰.

⁵⁴ Jones, Graham, Sackett, Geroulanos 1973: 402. Vanderpool, McCredie, Steinberg 1962: 38, note 7.

⁵⁵ Osborne 1985: 193, tab. 12. *Adelt* 21B, 1966: 106.

⁵⁶ Young 1956: 122-124, pl. 34.

⁵⁷ Jones, Graham, Sackett, Geroulanos 1973: 451-452.

⁵⁸ Jones 1990: 63, note 3. See also Lüdorf 1998/1999: 112, E 46.

⁵⁹ Jones 1990: 66. Lüdorf 1998/1999: 87, B 21.

⁶⁰ Jones 1990: 67. Lüdorf 1998/1999: 87, B 19. Jones does not seem to suggest any dating, but Lüdorf places them on typological basis in late antiquity.

From a workshop of the Classical Period located in the K. Mexas plot - a small hill in the boundary of the modern village - comes also a cover, exposed in the Lavrion museum, characterized by the incision of the genitive ΦΙΛΟΚΡΑΤΟΥ[Σ] on the inner surface⁶¹, probably the name of the owner (fig. 10).



Fig. 10 – Lid with the engraving of the owner's name, Thorikos, Classical Period

2. 4. 3 Legrena

In the upper valley of Legrena, just West of Sounion, several fragments of hives and covers of the Classical times were found around the ruins of buildings⁶² and a sanctuary, in the hamlet Palaia Kopraisia⁶³.

2. 5 South-western Attica

2. 5. 1 Aghia Photini

Traces of beekeeping were also found in Aghia Photini, South Western Attica. On top of the hill of Prophitis Ilias, in fact, several fragments of Hellenistic period⁶⁴ were brought to light near walls that can be attributed to a sanctuarial structure⁶⁵; on the West side of the valley of Aghia Photini, the point of junction with the area of Thimari, on the terraces were found numerous fragments related to hives and their lids, mainly of the Classical Period, with the presence of some fragments from Late Antiquity⁶⁶.

⁶¹ Salliora-Oikononakou 2007: 59/60.

⁶² Lohmann 1993: 516, LE 18; 520, LE 24.

⁶³ Lohmann 1993: 519, LE 20-25, LE 20-26.

⁶⁴ Lohmann 1993: 416, PH 5; Lüdorf 1998/1999: 90, BR 14.

⁶⁵ The value of honey as a religious offering has been always known, see Bortolin 2008: 28-33.

⁶⁶ Lohmann 1993: 422, PH 19; Lüdorf 1998/1999: 89, BR 5 e 8; 90, BR 15; 91, BR 21; 93, BR 38; 95, BR 49, 50 e 52; 98, BR 71 e 72; 100, BR 85; 103, BB 9; 104, BB 16 e 20; 116, BD 25; 127, BW 65.

2. 5. 2 Thimari

In Thimari, south western Attica, several fragments of hives, extension rings and clay lids of the Classical and Hellenistic Period: they all come from a tower farm in the southern area of Thimari, located on a small isolated hill⁶⁷.

2. 5. 3 Charaka

In the Valley of Charaka, south western Attica, numerous pottery fragments related to hives were brought to light, in farms and terracings⁶⁸; the fragments mostly belong to the Classical or Hellenistic period, but there are some traces of beekeeping also in the Late Antiquity.

2. 6 North-western Attica

2. 6. 1 Dema Tower, Pyrgarathi

Near the tower belonging to the wall of Dema, on the pass between Mount Egaleo and Mount Parnitha, several fragments related to clay beehives were found: twenty-seven fragments of a cover are entirely reconstructable⁶⁹, a fragment of a lid with a large epsilon engraved in the center of the inner surface⁷⁰ and twenty-five combed fragments of bottoms and walls⁷¹. It was proposed that the tower has served as apiary during the second phase of occupation (ca. 340-300 BC), when a beekeeper used the rubble as support for his hives⁷².

2. 6. 2 Yerovouno

About 6 km east of the wall of Dema, in the ruins of the fortification walls several fragments of walls of clay beehives were recovered⁷³, dated between the late fourth and early third century BC⁷⁴.

2. 6. 3 Thrasian Plain

In the Thrasian Plain, South West of the wall of Dema, during a surface survey numerous fragments of “umbrella stands”⁷⁵, dating to the third century full BC⁷⁶, emerged among the ruins of a fort.

⁶⁷ Lohmann 1993: 459, TH 1. Lüdorf 1998/1999: 88, BR 3; 92, BR 31; 95, BR 53; 99, BR 79; 106, E 5 – E 8; 115, BD 17; 116, BD 24.

⁶⁸ Lohmann 1993: 355, A 53-18 – A 53-23; 360, CH 8-4 e 8-5; 365, CH 15-27 – 15-29; 372, CH 27; 373, CH 28; 381, CH 44.

⁶⁹ Munn 1993: 77, 18.

⁷⁰ Munn 1993: 77, 19.

⁷¹ Munn 1993: 77-78, 20.

⁷² Munn 1993: 91.

⁷³ McCredie 1966: 62.

⁷⁴ Lüdorf 1998/1999: 128, BW 71.

⁷⁵ Mc Credie 1966: 70.

⁷⁶ Lüdorf 1998/1999: 128, BW 72.

2. 7 North-eastern Attica

2. 7. 1 Marathon

Excavations conducted in 1971 by A. Liangouras, then epimelete in Attica, in the plain of Marathon, unearthed the burial of a seven-year-old, approximately 200m south east of the Mound of Plataeans⁷⁷. The child's body had been placed in two large pots, juxtaposed opening against opening, so as to match perfectly and create a modest sarcophagus (figs. 11-12): both are characterized by a raw red/orange clay, not decorated nor polished, with a profile highlighted by rims, a slightly convex base and internal combing. The two vessels were not, for obvious reasons, associated with the other elements which generally complete the structure of the beehive, but their construction suggests that they were originally used with these accessories: both have in fact the scratches and the everted rim that would have kept firm the clamping rope of the extension ring and of the clay lid.

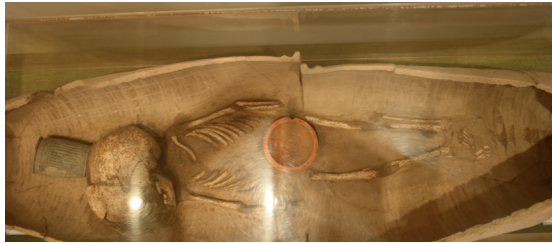


Fig. 11 – Burial of a seven-year-old assembled with two clay beehives, Marathon, II century BC



Fig. 12 – Burial of a seven-year-old assembled with two clay beehives, Marathon, II century BC

⁷⁷ Jones 1976: 88-91. Dated to the Early Roman Period, second century BC, Lüdorf 1998/1999: 86, B 13 e B 14; Pologiorghi 1998: 128.

2. 7. 2 Oropos

In the western sector of the West Necropolis of Oropos, the excavations have yielded an *enchytrismos* burial (tomb 17) in which the child’s body was held in two clay hives (ΜΩ 395 and 396), characterized by inner scratches for about half of the circumference, joined to the edges to match⁷⁸.

News of beehives sherds is also given in the publication of the results of the survey conducted by the University of Manitoba in the eighties and nineties in the Oropia region, which highlights the great spread of beekeeping activities in the area⁷⁹.

2. 7. 3 Rhamnous

Excavations carried out between the end of the seventies and the eighties in the northern road of the sanctuary unearthed several tombs of the Classical Period, including a child one (tomb 13) in which the body of the small deceased was enclosed in two clay beehives united to the lips⁸⁰.

2. 7. 4 Kynosoura

From the southern and eastern slopes of the highest upland of Kynosoura, among a large number of ruins, probably of houses, comes a lip sherd of “umbrella stand”⁸¹, characterized by inner horizontal and vertical scratches.

3. Vertical Beehives

The second model of beehive, of which we have smaller evidence, is vertical. Its origin has long been discussed as it requires a more complex extraction technique: in this case, honeycombs had to be easily removed from above, though the use of fumigation was still necessary⁸². Manufactured on the lathe, conical in shape with a flat base and a large mouth, this type of hive is smaller than that previously described (h. 30-33 cm). In addition to the grooves engraved in the inner part - developed vertically throughout the height or three quarters of it - it has a small rectangular (2.5-4.5 cm) or circular (0.5-1.5 cm) opening in the lower part of the wall or near the bottom, designed to allow the passage of the bees. In some cases, it can be equipped with sturdy horizontal handles, to facilitate transportation.

⁷⁸ A dating to the Early Roman Period is suggested, Pologiorghi 1998: 127-128.

⁷⁹ Cosmopoulos 2001: 67.

⁸⁰ Petrakos 1992: 5/6. The dating is provided by some elements of the grave goods, as a small achromatic bowl of the late fourth century BC and a black-burnished pyxis of the last quarter of the same century.

⁸¹ McCredie 1966: 46, n. 5, tav. XX f. Dated between the fifth and the end of the fourth century BC; Lüdorf 1998/1999: 100, BR 87.

⁸² Bortolin 2008: 79.

3. 1 City of Athens

In Attica, the only terracotta beehive of vertical type⁸³ found so far comes from the American excavations in the Agora⁸⁴. Although the vessel is only partially preserved, its identity as a beehive is ensured not only by the cylindrical shape, but also by the inner scratches. The peculiarity of this hive, however, is the presence of a small opening at the bottom, in the center, which probably constituted the entry hole for the bees. The hive must have been positioned vertically, with the hole down, and would be one of the first examples of vertical hive. Several examples of this type were found in Isthmia, where they were in use in the third century AD⁸⁵; entrance holes are here generally rectangular and positioned in the lower half of the beehive, just above the bottom. At least two of these, however, have a bottom hole: Anderson-Stojanovic and Jones speculated that the hives would lie on a support structure to allow the bees access and that this arrangement would help to ward off predators and inclement weather. The vertical orientation offered an important advantage, since the bees would attack the combs to the coverage or to slats arranged near the mouth, making the honey harvest significantly easier.

4. CONCLUSIONS

In this brief analysis, we tried to go through all the archaeological finds traceable to beekeeping activities (hives, extension rings and lids), so as to organize a sort of 'topography' of beekeeping in Attica (fig. 13). To truly complete a study of the phenomenon in the region the difficulties are many: the data are often very vague, sometimes they are not even related to quantitative elements that would be useful to understand the real effect of the honey production in a particular area compared to others. The attempt to understand the routes of sale of this luxury item and of the markets affected proves equally difficult, since analyses in this direction have never been performed and the only help can come from the sources. Nevertheless, even from this quick list, it is possible to find an archaeological confirmation to what is handed down by ancient authors: the whole of Attica seems, in fact, affected by the phenomenon, in the countryside but even in the cities; also, it is worthy noticing a concentration of production sites in the areas most

⁸³ Models of how vertical wicker hives should have been are to be seen according to Armando Cherici in two clay artifacts dating to the geometric period, found in different contexts of Attica, see Cherici 1991: 217-218.

⁸⁴ Rotroff 2006: 129, n. 373. The identification as a beehive of vertical type is not fully safe, but the alternative that it was positioned horizontally and then emptied of the honeycombs from the bottom seems less convincing, given that the bottom does not seem removable.

⁸⁵ Cfr. Anderson-Stojanović, Jones 2002.

celebrated in antiquity, the slopes of Mount Hymettus with his proverbial thyme and the area of Cape Sounion, famous, as well as for silver, for μέλι ἀκάπνιστον.

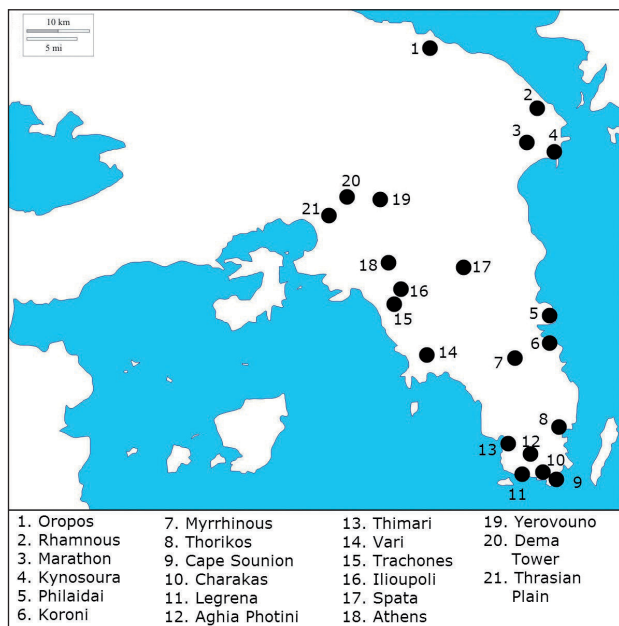


Fig. 13 – Map with the centres of honey production: clear appear the concentrations around Mount Hymettus and Cape Sounion

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“<Μέλι> πρωτεύει τὸ Ἀττικὸν καὶ τούτου τὸ ὕμνητιον καλούμενον”
Honey production in Attica, an antique excellence

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