

HONEY CULTURE IN BYZANTIUM

AN OUTLINE OF TEXTUAL, ICONOGRAPHIC AND ARCHAEOLOGICAL EVIDENCE

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Apiculture is a stockbreeding activity of diachronic and intercultural importance, as it covers a basic human need, the consumption of sweet food, a need as old as human existence itself. Nevertheless, the process followed for the production, the use of beekeeping products and primarily, the multifaceted expressions of these activities in the art, archaeology, intellectual and material culture of the Byzantine era, have not been closely documented. The present paper attempts to fill this gap, focusing on information pertaining to three main fields, namely the various textual, artistic and archaeological sources.

A limited interest in this realm of study was already demonstrated in the time of Aristotle and, later on, by the Roman agricultural authorship (Varro, Virgil, Columella, Pliny the Elder, Pappus of Alexandria, Palladius¹). However, it was not pursued in the Byzantine era, with certain exceptions. The modern scholarship on this last subject-matter, such as the books of Phaidon Koukoules, *Life and Culture of the Byzantines*, in 1952, and the dissertation of Eleni Chouliara-Raiou, *L'abeille et le miel en Égypte d'après les papyrus grecs*, in 1989, coupled with the conference *The bee and its products*, held at Nikiti, in Chalikidiki, and the recent article of Angeliki Liveri, *Die Biene und ihre Produkte in der Kunst und im Alltagsleben (Frühchristliche und Byzantinische Zeit)*, in the journal *Zbornik radova Vizantološkog instituta* in 2011, expanded considerably the relevant bibliography. Joanita Vroom and Platon Petridis included ceramic beehives, finds from their own excavation research from Boeotia and Delphi, in their handbooks *Byzantine to modern pottery in the Aegean: 7th to 20th century. An introduction and field guide*, Utrecht 2005

1 Crane 1994, 118-135. Crane 1999, 204-211, 558. Mavrofridis 2011, 266-271.

and *Early Byzantine pottery in Greece*, Athens 2013. As a result, beehives met attention and currently are increasingly exhibited in their capacity as cultural objects, especially in Athens (i.e. Syntagma metro station, Airport museum).

The insect and its products met extensive literary uses. They appear frequently as paradigms in the theological works of saint Basil the Great, bishop of Caesarea, whose text of the *Hexaemeron (The Six Days of Creation)* created an extensive tradition². Commonly used schemes by Fathers of the Orthodox Church include the contrast between physical weakness and mental strength, the comparison of the divine dicta to *sweeter than honey*, the attribution of the insect as industrious and diligent. Moreover, references in the Lives of Saints not only provide useful information concerning apiculture in a theoretical basis but could also be used to shed light on practical activities during the Byzantine era. In a symbolic context bees sometimes express and depict evil nature and demonic moral (*Life of Nikon the Repenter*, 1000-1042 or 1042 or 1149³) whereas in other occasions they became part of a heavenly vision (*Life of Andrew the Fool*, 5th or 6th century⁴).

Furthermore, references related to the honey production and the possession of beehives as personal property prove valuable. A typical example is the account of the wealthy saint Philaretos (821/822) who is reported to own an impressive total of 250 hives in Paphlagonia, Pontos⁵. Inscriptions and lyric tributes

2 Giet 1968(1950), 446-448. Grant 1999, 91-92.

3 Lampsidis 1987, 72, lines 34-39, 252, lines 49-51. Sullivan 1987, 124-125, chapter 36, par. 10-15.

4 Rydén 1995, II, 48, line 524.

5 Rydén 2002, 74-74, line 249, 82, lines 352-375.

(Georgios Tornikios' praise to the deceased Anna Komnene, 1153⁶) add to the importance of honey and bees within Byzantine popular culture. The citation of honey on the funerary marble slab of Isaakios Komnenos (second half of the 12th century), in the katholicon of the monastery of Panagia Kosmosoteira in Vira (Pherae), is of great interest⁷. The same applies to the dedicatory inscription of the All Saints church in Apano (Upper) Floria Selinou in Crete (1470), which mentions ten beehives, a sole known example of that kind of donorship⁸.

The sufficiency in honey and wax was a priority for the monastic communities in order for them to address both nutritional and other practical needs⁹. It was achieved either through inheritance endowments, such as those made by Ioannis Xenos (Crete, 1031¹⁰) and Theodoros Skaranos (Chalkidiki, 1270-1274¹¹), or through the establishment of apiaries, as mentioned in Athonian monastic archives. According to the law, bees fell in the category of animate, movable assets and were considered as wild flying animals only if they remained free in nature. A tax on beekeeping and bee exploitation appeared for the first time in 1152 under the term *melissoennomion*¹² or *dosis melisson* or *kouveliatikon*.

The only Byzantine treatise exclusively focused on farm life, including chapters dedicated to apiculture (2 and 9 of the book XV), was the *Geoponica*, a compilation by an unknown writer of older works, composed at around the 10th century. The attribution of the name *chytridion* (pyre vessel) to the fumigator (*kapnistirion*) stands out among the various practical details related to the production process, since it does not appear in other sources¹³. Apicultural products are mentioned in a variety of literature works, ranging from medical prescriptions and pharmaceutical treatises to popular narrations,

6 Darrouzès 1970, 297-299, n. 14.

7 Rhoby 2014, 136-139 (GR2), fig. 6, 991, where past bibliography.

8 Kalopissi-Verti 2003, 85, where past bibliography.

9 Andoudis 2000(1996), 211-220.

10 Thomadakis 1948, 59, 60, line 137. Thomas, Constantinides-Hero 2002, 143-147 (Fiaccadori).

11 Bompaire 1964, n. 9A, line 22. On Skaranos: Loos 1978, 11-12. Lefort 1986, 362-372.

12 Lemerle et al. 1982, n. 25, 132. Lefort et al. 1994, n. 56, 70, 77, 79 dated in 1220-1328. Oikonomidès 1992, 74-76.

13 Beckh 1994(1895), 447, chapt. 6, par. 1-3. Dalby 2011, 296-307.



Fig. 1 Postcard, apiary in Chaladri, Athens, first half of 20th century.

such as the *Oneirocritica*¹⁴, the novel of *Barlaam and Josaphat*¹⁵ and the *Acts of Joseph and his wife Aseneth*. The latter includes the first mention of the female queen as the leader of the swarm, indicating probably a high educational level on apicultural biology and practices¹⁶.

The professional specialisation and the institutional organization of the people involved in apiculture, the equipment of apiarists, the manufacture centers and the various uses and trade of apiculture products consist another field of investigation. The time of collection or the origin of the nectar influenced the quality of the honey, as well as the flavor, the color and the aroma, which also affected wax quality in a lesser grade. The establishment of the monastic foundations and their gradual economic growth played a significant role in the development of apiculture, especially after the end of Iconoclasm (843). Scattered evidence for honey production indicates the presence of beekeeping centers in the areas of western and central Asia Minor, Mount Athos and in particular Chalkidiki, Thebes, Cyprus, Monemvasia. Non-fumigated honey was a distinct category which was probably collected from beehive extension rings, without using smoke¹⁷. Thyme honey, collected at the feet of Mount Hymettus, was valued at all times, while the honey production of Athens, especially that coming from the Kaisariani monastery, was widely reputed, even in the recent years¹⁸ (Fig. 1).

14 Oberhelman 2008, 98-99, 159, 180, 216.

15 Volk 2006, 127-130.

16 Philonenko 1968, 186-190, chapter 16, par. 1-17. West 1974, 70-81.

17 Mavrofridis 2009, 200-204.

18 Kolovou 1999, 99. Mpouras 2010, 111. Pallis 2013, 164.

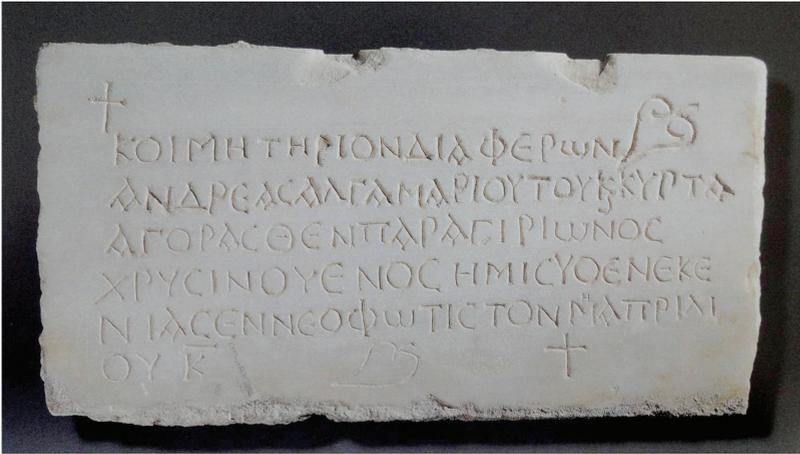


Fig. 2 A funerary marble inscription of a *saldamaris*, from Lerna, 5th - 6th century.



Fig. 3 Miniature of Aristaeos inventing beekeeping, *Cynegetics* by Pseudo-Oppian (cod. gr. 479), mid-second half 11th century.

In the *Book of the Eparch* by the emperor Leo VI the Wise, apiarists were not regarded as independent professionals. The specialists associated with the most relevant to honey and wax were *saldamarioi* (expert grocers) and the profitable *keropoioi* (wax merchants), who run the trade of the respective commodities, without, however, being their producers (Fig. 2)¹⁹.

The collection of honey was the hard task, regarded as a peasant activity that demanded skill and physical power. It was performed with the use of few, basic, yet necessary, tools. The fumigator was, without question, the most useful device from Antiquity up to present day. Even though its form was attested from prehistoric finds, its Byzantine

¹⁹ Koder 1991, 31.

counterpart is known solely through the descriptive term *chytridion* in *Geoponika*. Previous research considered the apiarists' protective clothing as first introduced in the medieval West. Nevertheless, a type of perforated "face mask" was depicted in a Byzantine miniature, included in the manuscript cod. Gr. 479 of the *Cynegetics* (*On Hunting*) by Pseudo-Oppian (second half of 11th century), relating the invention of apiculture to Aristaeos (Fig. 3)²⁰. This may be considered as an indication for technical progress in the field of honey collection in Byzantium.

Beehives consisting an apiary on a stable basis were placed in rows, facing south, in order to be protected from winds. Their position should ensure protection from hostile animals and harsh weather conditions. Most busy period of year was from the end of spring to the beginning of autumn, when three main processes took place; swarm capture and transport to a hive, bees' reproduction, honey harvest. Tools used in the processes of extracting, transport and storing of beekeeping products, were limited to the very basic –mainly knives.

The uses of honey and wax were numerous and diverse. For many centuries honey remained a unique delicacy, the only available sweetener before the introduction of sugar following the Crusades. Furthermore, it was a popular additive, its use ranging from cooking, pastry and refreshing herbal tea recipes to food preserving, due to its antioxidant properties²¹. In monasteries, honey was

²⁰ Spatharakis 2004, fig. 51.

²¹ Dalby 2003, 151, 152, 157. Anagnostakis 2013, 82, 88-92. Anagnostakis 2013(a), 175, 176, 180, 181. Liveri 2010, 24-29.

a vital dietary substance, served on specific days and season periods²². On the other hand, wax, next to its self-evident use for candles, was a basic ingredient for the so-called encaustic technique²³ and was mixed with Chios mastic in order to produce a dye applied on sculptures²⁴. Both wax and honey were widely applied in medical and pharmaceutical treatments, especially those related to cosmetics and gynecology. The use of bees as guided "biological" weapons, following a century-long tradition, was described in Byzantine written sources, such as the *Taktika* (895-907) of Emperor Leo VI the Wise, in the chapter *On Naval Warfare*²⁵. Bees were also related to torture in some *Lives* of saints, as in the cases of Maurikios and Asteios, bishop of Dyrrachion. The latter was put to death while covered with honey and stung by bees under the hot sun in the year²⁶.

Bees, beehives and apicultural scenes are present in a limited number of Byzantine pictorial sources. These are usually details depicted in mosaics, miniature artifacts, illuminated manuscripts and sculptures. They represent various forms of beehives;

(a) woven wicker, as in the cases of the mosaic pavement of the Hippolytos Mansion in the basilica of Madaba in Jordan²⁷ (**Fig. 4**), probably the ivory caskets attributed to Constantinopolitan workshops of the so-called "Macedonian Renaissance"²⁸, the 12th century reliquary from the Treasury of San Marco, Venice²⁹,

(b) horizontal wooden and plank (*Sacra Parallela* cod. 923³⁰ **Fig. 5**), *Homilies* of Gregory of Nazianzos cod. Par. gr. 533³¹,

(c) clay, cylindrical shaped, open only in front end (monostomes, *Cynegetics-On Haunting* by Pseudo-Oppian cod. Gr. 479,³² (**Fig. 3**),

22 Talbot 2007, 115.

23 Doxiadi 1996, 93-98.

24 Coden 2004, 304-311. Coden 2006, 33-68.

25 Dennis 2005, 526.

26 Lockwood 2008, 9-25. Mavrofridis 2008, 233-238. Germanidou 2013, 91-104.

27 Piccirillo 1993, 66, 51, fig. 3, 55, fig. 6. Buchhausen 1986, 147-148, fig. 124, 125, pl. IX.

28 Beckwith 1962, 12, pl. 16.

29 *Architecture as icon...* 2010, 160-161, where past bibliography.

30 Weitzmann 1979, 120, fig. 237, pl. LX.

31 Galavaris 1969, 236. *Byzance. L'art byzantin...* 1992, 356, n. 267.

32 Spatharakis 2004, fig. 128.



Fig. 4 Mosaic pavement of Theotokos basilica, depicting cupid stung by bees in Madaba, Jordan, 6th century.



Fig. 5 Miniature of a wooden plank beehive, Sacra Parallela, cod. Par. gr. 923, first or second half of 9th century.

(d) horizontal tree trunks or clay, open at both ends (distomes), *Homilies* of Gregory of Nazianzos cod. Taphou 14³³ (**Fig. 6**), and finally

(e) vertical tree trunks (*Job*, Par. Gr. 135³⁴ **Fig. 7**).

The different types of beehives not only bear witness to the apicultural practices and methods used in various regions at specific time-period; they can also serve as potential evidence for a number of factors, such as the local materials available for manufacturing daily objects, the regional eco-system and the related economic sources exploited. From the artistic point of view, the beehive types can be used in the study of pictorial sources, principally in illuminated manuscripts. A key-example is the plank 33 Vocotopoulos 2002, 137, fig. 64. 34 Velmans 1967, 227, 228, pl. 23. Liveri 2010, fig.7. Linardou 2011, fig. 11.4. See Andrews 2008, 111-119 for past bibliography.



Fig. 6 Horizontal tree trunks or clay beehives, open at both ends (distomes), Homilies of Gregory of Nazianzos, cod. Taphou 14, 1075-1085.



Fig. 7 Miniature of a tree-trunk beehive, Job cod. Par. gr. 135, 1362.

hive depicted in *Sacra Parallela*, which may probably be attributed to a South Italian workshop rather than a Palestinian one, based on the fact that in the latter region wood was scarce and hardly used for utilitarian objects. Another case is the trunk-hive illustrated at *Job*, presenting the notch opened at a high point, a structural detail that may allude to western medieval patterns.

In the mid Byzantine era, the most prominent pictorial source on apiculture, though exhibiting strong western influences, is the group of the *Exultet* rolls, created in monasteries south of Rome. They owe their name to the initial word of the hymn *Exultet iam angelica turba coelorum...* chanted on Holy Saturday, according to the Latin ritual³⁵. The hymn included the "Praise of the Bees", where the bee is exalted as creator of the holy wax, the honey, and above all, as a direct symbol of the Virgin Mary due to the insect's reputed physical chastity. The graphic details of the description allowed for bold illustrations of apicultural scenes. Three categories may be distinguished according to the main theme depicted: in the first group, the character of the scenes was narrative and the tasks of apiculture were presented realistically. Beekeepers were depicted, in various and vivid poses, performing honey harvest and production transport, swarm gathering and capture. They were using all the necessary equipment and were clad in the appropriate clothing, which covers the whole body, hands and feet in full like a primary "working-uniform" (Bari 1, Mirabella 1, Brit. Mus. Add. Ms. 30337, Vat. Lat. Barberini, Pisa 2, probably Bari 2, **Fig. 8**).

The main theme of the second group is the depiction of beehives and bees, without portraying any people or bearing connection to a religious scene. In the majority of images, beehives made mainly of wood and planks are piled in rows, forming a roofed apiary (Vat. Lat. 9820, Capua 2, Troia 1, Gaeta 2, Gaeta 3, Montecassino 2, Paris 710 (Fondi), Troia 2, Troia 3, Casanatesne, Salerno, **Fig. 9**). In the third group, bees entering and flying around their beehives are exceptionally pictured flanking the scene of the Nativity of Christ, as symbols of the Immaculate Conception and the birth of Christ by Virgin Mary. This iconographic unicum in medieval art of the period stands out for its bold character, remarkable synthesis and striking compelling dogmatic allusions 35 The bibliography of the *Exultet* rolls is extensive. See in general: Avery 1936. Belting 1968, 167-183. Cavallo 1973. Belting 1974, 5-6, 15-16. Cavallo, Orofino, Pecere 1994, 129-141. Pace 1994, 15-33. Forrest-Kelly 1996. Speciale 2000, 191-224. Tsuji 2000, 103-140.

(Montecassino1, Gaeta 1, J. Rylands Libr.)³⁶.

There are few examples of individual representation of bees. In most cases bees either form decorative part of a wider pictorial composition imitating nature or they assume a symbolic function. In this latter group one can include the intriguing and rare representation of bees among other Christological motifs found in the mosaic pavement of the baptistery at Kelibia in Tunisia³⁷; also, the early Christian (6th century) relief images portrayed on capitals from Constantinople and on a marble door frame from the Acheiropiitos church in Thessaloniki (Fig. 10)³⁸. Honey, on the other hand, is singularly depicted in the Parable of the Unicorn, in the novel of *Barlaam and Josaphat*, symbolizing human vanity³⁹. The decorative design of the hexagonal honeycomb is occasionally, though not often, depicted as an accessory pattern on wall paintings, drafted for example on mantles and secondary architectural spaces, while also used for the outline of liturgical ware. In a few notable cases the motif acquired a symbolic meaning, probably emanating from funerary allusions of ancient times, for example on the garment covering the death bed in the scene of the Dormition of the Virgin in the church of Panagia Mavriotissa, Kastoria⁴⁰.

Archaeological evidence for beehives is a valuable source of information, although rarely identified and recorded. It was only in the late '70s that pottery sherds with incisions on their inner surface were unearthed from the Hellenistic Vari House at Athens and were chemically tested with the method of gas chromatography by the American excavators⁴¹. Wax residues were found on the walls of the sherds, confirming the hypothesis of their apicultural use. Interior grooving in random lining became the main identification lead for the horizontal, clay beehives, although it was never connected to any real practical need or met functional requirements.

The excavated beehive finds of Byzantine date are brought together and studied, based on their form and typology, but also on their geographic distribution and chronological range. Right from the 36 Germanidou 2012, 257-264.

37 Février, Poinssot 1959, 151-156. Palazzo 1992, 102-120. Liveri 2010, 11-12, fig. 3.

38 Firatli 1974, 45, fig. 7. Maguire 2012, 55-57, εικ. 2.2.

39 Der Nersessian 1970, 63-67. Dufrenne 1978, 91, 143-144.

40 Pelekanidis, Chatzidakis 1992, 66-83.

41 Jones, Graham, Sackett 1973, 354-452.



Fig. 8 Miniature of Exultet roll Vat. Lat. Barberini 592, 1070-1100.



Fig. 9 Miniature of Exultet roll Troia 3, 1150-1200.



Fig. 10 Bees on a marble door frame, from Acheiropiitos church, Thessaloniki, 6th century.



Fig. 11 A clay beehive from Isthmia, Corinth, 6th century. Details of the inner grooves and the domed back.

start, one has to acknowledge the limited amount of published material. Furthermore, errors used while describing beekeeping vessels and sherds impeded archaeological documentation and forestalled conclusions. From a geographical perspective, finds were recorded in Attica (Ancient Agora of Athens, feet of Hymettus, Mesogeia outskirts)⁴², Boeotia (both from the capital Thebes, as the centre of production, and from other rural sites)⁴³, Delphi⁴⁴, Crete (especially Eleftherna⁴⁵ and Gortyna⁴⁶), Skyros⁴⁷ and the Hexamilion fortress in Isthmia, Corinth⁴⁸ **Fig. 11**). From a chronological point of view, samples were

42 *Everyday Life...*2002, 135, n. 147. *Alimos...*2006, 139, 143, 146.

43 Vroom 2003, 140, 144-145. Vroom 2005, 50-51

44 Pétridis 2003(1999), 445, fig. 5. Pétridis 2010, 120-121, pl. 39, fig. 209, 210. Pétridis 2010(2006), 95, fig. 8. Pétridis 2013, 197, fig. 40.

45 Anderson-Stojanović, Jones 2002, 345-376.

46 Yangaki 2005, 162, 464, pl. VI, fig. 5,6,7.

47 Karambinis 2015, sporadically.

48 Di Vita 1993(1988-1989), 446-448, figs. 33a-b, 34a-b. Crane 1999, 191-192, fig. 22.2d.

mainly dated to the 6th century, with the absence of late Byzantine finds being noteworthy.

In all these cases, beehives were made of clay, were meant to be positioned horizontally in groups and form cylindrical walls. Despite the limited number of known examples, some interesting aspects of material technology can still be investigated: these may relate to the various arrangements of the inner grooves or to the presence of decorative elements, such as painted bands and signs on the exterior (**Fig. 12**), and characteristic letters. Furthermore, the construction of notches on the rear closed end of the vessel improved ventilation and facilitated both, the bees' circulation and honey collection by the beekeepers. Found in the same contexts with beehive sherds and also related to apicultural practices were such items as clay circular extension rings, which were adjusted on the opening to increase the capacity of the beehive, as well as the lids equipped with a bee passage hole, which blocked the entrance to the vessel. No architectural remains have been identified as an apiary, at least from the Byzantine era. A single



Fig. 12 A clay beehive from Delphi, with painted bands on the exterior, 6th century.

exception is recorded in the blocks of beehives hewn in the tuff rocks of the Cappadocian plains. This, however, is a singular form of apiculture adjusted to a unique and distinctive landscape⁴⁹.

Concluding this short presentation, questions are raised on the matters that were briefly presented above; the documentation of the almost unknown beekeeping culture within the frame of the Byzantine society; the re-creation of a particular aspect of the daily life and the working routine of the common Byzantine people, merely obscured or partly exiled by current bibliography and scholarship; finally, the highlighting of the "aesthetic" value of a humble yet functional object of everyday life, such as a beehive, and its contribution to the clarification of collateral issues related to written sources, works of art, topography and ceramics.

⁴⁹ Demenge 1995, 48. Bixio, De Pascale 2013(2012), 61-68.

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