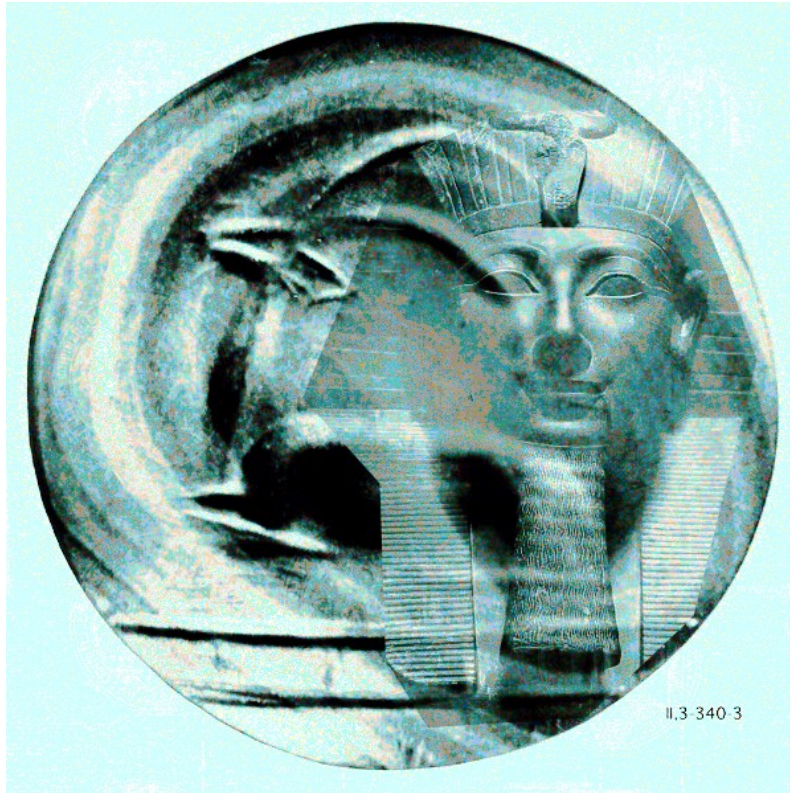


# **MINOAN CIVILISATION**



**Cretan Aromatics**

**In the Eighteenth Dynasty of Egypt**

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## Introduction

*And let thy head lack no oil.*

*Ecclesiastes, 9:8*

The Late Bronze Age Mediterranean basin is theatre to a fervid exchange of knowledge and crafts. The evidence at our disposal is provided by the failures of that thick network – the findings in the shipwrecks, the carbonisation of organic residues, the accidental baking of clay tablets, the items preserved under layers of lava after the eruption of Thera – but also by the presence of art in unexpected foreign territories, and the epigraphic resources of the Near East. These provide precious insights into the Minoan civilisation of Crete, where texts still lie undeciphered.

To compensate for this, much indeed has been written on the relations between Bronze Age Crete and Egypt: the votive scarabs found in Minoan tombs, and the Minoan ceramics on Egyptian soil<sup>1</sup>, and how the diversity of their agricultural produce must have unavoidably sparked interest in the interaction.

In the course of this essay I will take for granted that a) Cretan aristocrats took part in the routes of royal gift exchange initiated by the ‘bands of brothers’ of the Near East, albeit no name ascribable to them figures in the correspondence of Amarna<sup>2</sup>, b) Minoan Crete is Keftiu (*kftw*) in the Egyptian texts<sup>3</sup>, c) the contacts between these two states might have been well established at the beginning of the second millennium BC (during the Middle Kingdom) but certainly intensified during the eighteenth dynasty of Egypt (XV-XIV centuries BC)<sup>4</sup>. The island of Crete was lacking in metals and raw materials. The native sources of copper from Gournia<sup>5</sup> were soon exhausted, copper ingots were imported from Cyprus, the Levantine coast, or Mount Sinai<sup>6</sup>. Egypt was also a possible source for semi-precious stones such as carnelian and amethyst<sup>7</sup>, needed for the Minoan art of seal-carving, and was known for abounding in gold<sup>8</sup>. In exchange the Minoans had much to offer:

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<sup>1</sup> Pendlebury 1930. Stella 1965. Merrillees 1972. Warren 1995. Cline 1994. Panagiotopoulos 2001, just to mention a few. On the relations of the Aegean states with the Near East, see Cline 1994.

<sup>2</sup> Edition of the Amarna letters by Moran 1992. Part of the letters was lost in the transportation on the back of the camels after the discovery. Some scholars do not exclude the hypothesis of interdynastic marriages (Warren 1995, Driessen 1999).

<sup>3</sup> Vercoutter 1956.

<sup>4</sup> A period of time spanning from Thutmose III and Amenhotep III. See table 1.

<sup>5</sup> Stella 1965.

<sup>6</sup> Forbes 1965.

<sup>7</sup> Warren 1995.

<sup>8</sup> Gold in Egypt is ‘like dirt’: the refrain in the Amarna correspondence, mined in Nubia and around the Red Sea. Analyses on the provenience of gold in Aegean art is lacking. Another possible source is Thrace.

products of the earth, olives and olive oil, wine, pulses, foodstuff, alongside luxury items, such as finely embroidered textiles, and aromatics. These latter came in the form of plant extracts, resins and substances destined to perfumery or as finished oil based unguents. The question this essay poses is on the nature of this Minoan contribution to the Egyptian collection of oils: on whether Cretan aromatics reached Egypt during the eighteenth dynasty, and under what light they were received.

The first observation to make is that all these resources are perishable. In order to shed light on the problem, I will turn my attention to something that time treats differently – the deterioration of the writings from Egypt around the land of Keftiu. I will begin by briefly reviewing part of the archaeological evidence of aromatic industries on Minoan Crete.

### **Workshops on Minoan Crete**

Traces of olive trees in the Aegean date to the fossils of the Pleistocene<sup>9</sup>, and ‘almond, fig, grape and olive seem to have had a regular presence since the Neolithic’<sup>10</sup> (7000-3200 BC) on Crete. Despite the difficulty in distinguishing wild from domesticated olives, archaeological evidence suggests an increased demand for its cultivation and intensive management of the fruits at the beginning of the Late Minoan period (XVII-XVI centuries BC onwards): “Hamilakis links their production fluctuations to power dynamics, that is, to elite competitive consumption of wine and use of perfumed oils in feasting contexts during the Neopalatial period and later to a more exclusive elite consumption, possibly in ceremonial practice’<sup>11</sup>. Coherent with this view is the presence of press installations on various LM sites possibly affiliated with palatial interests<sup>12</sup>.

In fact, the Minoan participation in the trade networks, and royal gift exchange routes with the states of the Eastern Mediterranean, naturally spurs researchers to investigate the production of luxury goods that could take place on Crete. Beyond timber, and the surplus of various agricultural products, we assume the most prestigious items exported from Minoan Crete were refined textiles, murex dye and aromatic oils. Aromatic oils in the Late Bronze figure in the lists of all kings’ reciprocal gifts in the Near East, in the dowry of their daughters, in their rites of coronation and weddings<sup>13</sup>. Mentions of the scented oil manufacture have also been found on the Linear B tablets of

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<sup>9</sup> Sarpaki 2012.

<sup>10</sup> Livarda, Kotzamani 2013.

<sup>11</sup> Livarda, Kotzamani 2013.

<sup>12</sup> Presses are particularly common in the Messara region, see Kommos (Shaw1993).

<sup>13</sup> Fappas 2011.

Knossos in Postpalatial times, Mycenaean Pylos and Mycenae<sup>14</sup>. The preparation of these oils is thought to be rather simple – by the steeping of herbal material in cold oil (*enfleurage*), or in oil that has been slightly heated (maceration)<sup>15</sup>. Olive oil possibly needed to be pre-treated in order to receive the final fragrance, in accordance with Classical sources on perfumery<sup>16</sup>, but its cosmetic and medicinal properties are still widely appreciated to this day. Scholars have tried to trace these techniques, outlined on the Linear B tablets, back to Minoan times. The recurrence of floral motifs in Minoan art, the variety of herbs native to the island, coupled with the appreciation for olive oil, constitute the intuitive argument in favour of the manufacture of Minoan scented oils.

Identifying a scented oil workshop is a notoriously arduous task, as most of the utensils could be borrowed from an ordinary kitchen<sup>17</sup>: blades to chop the herbs, large pots and cauldrons for steeping them in the proximity of a hearth. At the same time, one peculiar shape of undecorated ceramic vessel, initially considered a simple censer and later known as ‘firebox’, ‘from various sites on Crete, and from Minoan colonial sites’<sup>18</sup>, was one of the clues that led to the interpretation of room XLVII of the LM Palace of Zakros as a perfume workshop<sup>19</sup>. These vessels, whose simplest form is “a small, hollow, spherical capsule, solid on top and perforated underneath”, have been intended as *specialised equipment* for dry distillation:

“During the distillation procedure, the aromatic was put on the flanged rim of the vase and the vase was set on the fire or in a vessel containing hot water, while the pierced dome was intended to control heat and ventilation inside the vase, avoiding the direct contact of the substance with fire.”<sup>20</sup>

This type of vessel has never so far been found in Mycenaean times, neither does it figure in the Egyptian representations of unguent boilers. It is a technique well described in Classical times, but that might have been a distinctive feature of Minoan manufacture, to extract specific components of the herbs. The fireboxes of Mallia contained “remains of juniper berries, coriander and *Ferulago*

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<sup>14</sup> Bennett 1958. Shelmerdine 1985.

<sup>15</sup> Wylock 1971. It is possible a rudimentary form of distillation was in use too (Forbes 1965).

<sup>16</sup> Shelmerdine 1985. Theophrastus IV century BC, *de odoribus*.

<sup>17</sup> General observation also expressed by Shelmerdine 1985.

<sup>18</sup> Shelmerdine 1985. The first specimen was unearthed in Gournia by Miss Harriet Boyd in the very first years of the twentieth century. Georgiou 1973: <https://www.penn.museum/sites/expedition/minoan-fireboxes-from-gournia/>

<sup>19</sup> Excavation by Platon 1971. A concentration of these firebox-vessels was also accompanied by other instruments likely apt for the treatment of aromatics: ‘three-legged kettles, a large shallow basin, and a terra-cotta grill’ Shelmerdine 1985.

<sup>20</sup> D’Agata 1997.

*nodosa*”<sup>21</sup>, and indeed organic residue analysis is another important criterion to determine the nature of an assemblage of ceramics in a given space and thus the existence of a perfume workshop.

Gas chromatography/mass spectrometry (GC/MS) has permitted us to confirm the hypothesis of the “manufacture of perfumed oils and unguents on an industrial scale” in the LM I Vat Room of Mochlos<sup>22</sup> and to strengthen the one around the MM III Vat Room of Knossos<sup>23</sup>.

Yet, the most interesting case of a workshop so far unearthed on Bronze Age Crete dates much earlier, to the end of the Prepalatial period, or MM IA. This is the scented oil workshop of Bolanis at Khamalevri<sup>24</sup>, the most ancient so far excavated in the Aegean and the first source of evidence of the “supreme iris oil” extolled by Theophrastus. Residues of iris oil were collected from the clay vessels, alongside olive oil, honey and resin<sup>25</sup>. It is possible to believe iris oil was one of those unique aromatics produced in the Aegean, despite the difficulty in finding a convincing correspondence to it on the Linear B tablets of later times<sup>26</sup>.

Overall, the botanical analysis, the residues of organic material and the artistic representations of the Minoan flora reveal a much greater variety<sup>27</sup> of possible aromatic infused oils than the few names readable on the Linear B tablets, roughly classified in “sage-scented” (*pa-ko-we*), “rose-scented” (*wo-do-we*), “cyperus-treated” (*ku-pe-ro-we*), henna-dyed (*e-ti-we*), along with a series of undeciphered ideograms conjuncted with OLE, the ideogram for oil<sup>28</sup>. Both archaeological and epigraphic evidence, however, is missing in regard to two excellent oils that are likely to have been concocted on Minoan Crete: lily and saffron oil. Depictions of both these two flowers abound, to the point that the collection of crocuses extolled in the frescoes of Knossos and Akrotiri has often been given religious connotations<sup>29</sup>. Lilies grace the wall paintings of the Villa of Amnisos, figure on the seals, and are incised on a vessel from LM I Mochlos. This decoration on the vase could

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<sup>21</sup> Chapoutier in D’Agata 1997.

<sup>22</sup> Koh 2006. See also Soles and Davaras 1996.

<sup>23</sup> Panagiotaki 1999.

<sup>24</sup> Andreadaki-Vlazaki 1997.

<sup>25</sup> Andreadaki-Vlazaki 2010.

<sup>26</sup> Researchers proposed to interpret the word *wi-ri-za* in the Linear B tablets concerning aromatics as ‘root’, for iris oil is extracted by the root (Palmer 1957 in Shelmerdine 1985, Andreadaki-Vlazaki 2010).

<sup>27</sup> More remains of medicinal plants have been identified by the GC/MS analysis run on the EM smelting site of Chrysokamino. See Arnott 2008 in ‘Archaeology meets Science: Biomolecular Investigations in Bronze Age Greece’. Despite the research having been approved by Betancourt P. in the same volume, some other researchers have distanced themselves from the procedures adopted to take samples of the residues to analyse.

<sup>28</sup> These is one ideogram only readable in the Linear B series Fh of Knossos, *MU*, interpreted by Sacconi 1969 as myrrh, possibly coming from ‘the land of Punt’, south of Egypt.

<sup>29</sup> Marinatos 1993.

represent its content. It is also known that lily oil (*Lilium Candidum*) was manufactured in Egypt<sup>30</sup>, whereas saffron (*Crocus sativum*) has not yet ever been attested in Pharaonic times.<sup>31</sup>

## Keftiu and Egypt

Emissaries from the ‘land of Keftiu’ partake in the procession of gift bearers on the Theban wall paintings in the tombs of several officials of the eighteenth dynasty<sup>32</sup>. Their costumes and hairstyles are compatible with the iconography of the Aegeans, and the gifts they are carrying consist of various elaborate metal vessels and a bull head on a tray. Receiving ‘what is brought’ by the princes of foreign countries was a crucial moment in the career of the pharaoh’s officials, hence worth being eternalised in their tombs. In the tomb of Rekhmire, “... *the treasuries are overflowing with the tribute of all countries: oil, incense, wine*”<sup>33</sup>, and the chiefs of Keftiu are parading by the side of the tributaries of Punt, Retenu and the southerners<sup>34</sup>. The longstanding debate on the land of Keftiu<sup>35</sup> seems now resolved. This conclusion was further corroborated by the juxtaposition of its name with a series of Aegean toponyms on the funerary stele of Amenhotep III from Kom el-Hetan<sup>36</sup>. These textual references intensify during the eighteenth dynasty of Egypt (XV-XIV centuries BC), coupled with the periphrasis of ‘islands in the middle of the Great Green [sea]’, but do cease after that, coinciding with the decline of Minoan civilisation.<sup>37</sup>

Keftiu figures in a series of documents. In the medical papyrus of Ebers (dating to around the XVI century BC), a plant used as a remedy against constipation is said to resemble the *beans of the land of Keftiu*:

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<sup>30</sup> Manniche in Warren 2014.

<sup>31</sup> Merrillees 1972.

<sup>32</sup> In other translations: ‘tributes’, or as was highlighted by Panagiotopoulos 2001, just ‘what is brought’: these scenes on the Theban wall paintings ‘reflect rather than distort historical reality.’ The most cited depictions are from the tomb of Senmut, the vizier to Hatshepsut (Aegean figures with no descriptions), the tomb of Menkheperaseneb I, High Priest of Amon under Thutmose III, and Rekhmire’s, the vizier to Thutmose III. In these two cases, the figures are accompanied by the toponym of Keftiu. For more references see Cline 2009.

<sup>33</sup> Breasted, AR, 748.

<sup>34</sup> Vercoutter in Cline 2009.

<sup>35</sup> Interpretations have long differed, other proposals revolved around Cilicia (Wainwright 1931), and Cyprus (Strange 1980).

<sup>36</sup> Cline 2009.

<sup>37</sup> Later mentions of Keftiu in the XIX dynasty onwards are considered to belong to topographic lists that scribes used to replicate as part of their apprentice. Parallel to the decrease in the number of references to Keftiu, a new name already present in the list of Kom el Hetan appears in the Egyptian records, ‘Tanaja’ read as the rising Mycenaean power. Luce 1969.

<<... another [remedy] to cause purgation ... ' [section about an unknown herb] ' ... which are like beans from the land of Keftiu, and fruit of mnwh [colocynth?] are ground fine, put on honey and eaten by the man and swallowed with sweet wine 5 ro.>> (Translation by Ebbell 1937).

Scholars have tried to identify this bean as *Vicia Faba*<sup>38</sup>, but it could also be the *Lathyrus Climenum* found in the ashes of Akrotiri<sup>39</sup>. In order to receive precious stones and metals in exchange, it is likely that the rulers of Minoan Crete used to export large quantities of pulses, wheat, foodstuff, textiles, fruits, timber and oils<sup>40</sup>. The nature of the exchange, however, was not limited to the materials. A broader 'transfer of technologies and beliefs' was at play. Minoan craftsmen are thought to have worked on the frescoes of Egyptian palaces, adorning the walls with the typical motifs of bull-leaping and bright colours<sup>41</sup>. Moreover, in the medical Papyrus of London<sup>42</sup>, dating to the XV century BC, two incantations are reported in the language of Keftiu<sup>43</sup>:

<<Incantation for the Tanet-Amou (Asiatic) disease.

This is what the inhabitants of Keftiu recite:

S-n-t-k-p-p-w-y-i-i-m-n-t-r-k-k-r.>>

Incantations in the ancient world constituted an essential part of the medical practice, and this one in particular had 'to be said over froth of a fermented drink, urine and *sd.t*. To be applied on it'<sup>44</sup>, probably to endow the herbal concoction with new, more effective properties. Not only does this picture reveal that the language of Keftiu was known in Egypt, but it does also constitute the first epigraphic source on the Cretans wielding medical knowledge. In the terms of Babylonian medicine, on Minoan Crete we could find the *asu* – the pharmacist preparing herbs and plant infused oils – and the *ašipu* - the healer, pronouncing the incantations over them.

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<sup>38</sup> Warren 1995.

<sup>39</sup> Sarpaki 1987 in Panagiotakopulu 1995.

<sup>40</sup> Warren 1995 also proposes goathorns.

<sup>41</sup> See Tell el'Daba, Alalakh and Tell Kabri.

<sup>42</sup> Gordon 1932.

<sup>43</sup> The papyrus presents a lists of incantations in foreign languages. Unlike the others, the language of Keftiu is not Semitic, yet remains undeciphered. The second incantation is 'against Samuna', which bears a striking similarity with the Babylonian Samanu.

<sup>44</sup> Translation of this line by Borghouts in Kyriakidis 2002.



The healing practices of Minoan Crete must have reached Egypt. This realisation, however, does not yet solve our problem on which sorts of Cretan aromatics are to be found in the eighteenth dynasty of Egypt.

### **Cretan Aromatics in Egypt**

Another Egyptian record of particular interest to this investigation is the *Admonitions of Ipuwer*. The text is part of the Papyrus of Leiden, dating to the XIX dynasty but possibly a replica from the Middle Kingdom<sup>45</sup>, and incarnates the prototype of the ancient lamentations, where a state of devastation severely threatens the community:

<<No one really sails north to Byblos today. What shall we do for cedar for our mummies? Priests were buried with their produce, and [nobles] were embalmed with the oil thereof as far away as Keftiu, [but] they come no longer. Gold is lacking ...>>

Gold lacking in Egypt reveals the degree of dystopia the text conveys, where the interruptions of relations with Keftiu is listed in the malfunctions to dread. In this scenario, a connection between aromatics from Keftiu and the process of embalming is immediately established.

Egyptian burials required a meticulous arrangement of herbs and minerals. Before the mummification, bodies were washed in natron and anointed. *'The linen was greasy and some of it was saturated with oil ... bundles wrapped in greasy linen, all of which contained a mixture of resin and sand'*<sup>46</sup>. The ointments were part of the ceremony of the 'Opening of the Mouth', described in Pyramid Texts. A common way to indicate the sense of smell in Egyptian is 'the favour of the gods', perfumes are 'the wonders that belong to the gods', and in later texts 'the saliva of Horus opening the mouth'. In the rite, the *merhet*, or 'seven sacred oils', served to guide the deceased towards their mission in the afterlife. It is not possible to reconstruct the secret recipes with certainty but various resins, balms, gum-resins and fats recur in the residues on the mummies. Fragrant beeswax was used to cover 'ears, eyes, nose, mouth and the embalming incisions'<sup>47</sup>. Resins often replace the brains in

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<sup>45</sup> Crete and Egypt had contacts during the time of the XII dynasty of Egypt (Middle Kingdom) corresponding to the Minoan Protopalatial period, but did not leave trace in the available texts. Contacts between them had started much earlier, as Egyptian stone vessels 'known from Knossos, ranging in date from Predynastic to VI dynasty' seem to reveal. Warren 1995. The relevance of the replica could be interpreted as another instance of *history repeating itself*.

<sup>46</sup> Lucas 1948.

<sup>47</sup> Lucas 1948.

the crania, and other organs. These can be coniferous resins, such as pine resin, resin of fir, or myrrh from Punt, frankincense, laudanum. Laudanum from the shrub *Cistus Creticus* is a notorious resin of Crete, but not easily attestable in the archaeological traces of Minoan times<sup>48</sup>. It is attested in Egypt since the Old Kingdom<sup>49</sup>, despite not growing in Egypt<sup>50</sup>. However, both laudanum and the coniferous resins could be obtained from Crete, as well as from the Syrian coast or Cyprus.

An interesting finding from the funerary offerings of the XII-XIII dynasty is the lichen *Parmelia Furfuracea*, which figures in intact boxes amongst kohl pots, 'leaves, nuts, flint flakes, acacia thorns, scarabs, amulets, clay sealings, loose beads, shells, bits of resin, wax, pitch, and pieces of aromatic woods'<sup>51</sup>. This lichen was also used to fill the abdomen of the mummies since the XIX dynasty, and it is often considered a unique product from the Aegean, to the point some scholar had interpreted the later Linear B adjective 'pa-ko-we' as lichen-scented oil instead of 'sage-scented'<sup>52</sup>.

All these aromatic substances, after all, did not just merely serve as perfumes. The highest value of these herbs and oils is their all-encompassing nature, where *utile dulci* – what is advantageous is one with pleasure. Along with natron, bitumen, and salt to dessicate the corpse, insect-repellents were logically essential in the burials<sup>53</sup>. Coriander<sup>54</sup>, spices, onions<sup>55</sup>, covering the surfaces of oils, spikenard, vinegar, *amurca* (oil lees with soda)<sup>56</sup>. Another plant I would not be surprised to find is the myrtle, whose extract rich in salicylic acid could have possibly served as preservative and bactericide with a delightful scent. Myrtle figures in a fragment on the frescoes of Akrotiri and was certainly growing in the Aegean, and not in Egypt. Saffron oil could have also been a unique product of Crete, yet there is 'no firm evidence for it in Pharaonic Egypt'<sup>57</sup> before Ptolemaic times.

Another plant that does not grow in Egypt yet seems essential in the burials of early Pharaonic times is the juniper. Its oil was commonly employed for anointing, its wood was amongst

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<sup>48</sup> Warren 2002 identified the rose in the Blue Bird Fresco from Knossos as the cistus.

<sup>49</sup> Merrillees 1972. Newberry 1910 claims since the first dynasty, and that pharaohs' beard in honour of Osiris signifies the goat's beard impregnated of laudanum resin after a summer day of browsing in the shrubs.

<sup>50</sup> Proof of this is the Biblical passage in which Jacob brings laudanum in Egypt from Gilead. Not an Egyptian product. Gen. 37:25.

<sup>51</sup> Hayes 1955 in Merrillees 1972. The first trace of lichen dates to the XI dynasty.

<sup>52</sup> Stella 1958. Stella 1965. First scholar to claim lichen is unique in the Aegean – Schweinfurth 1882 in Merrillees 1972. On the meaning of 'pa-ko-we' as sage-scented see Bennett 1958, Shelmerdine 1985 and the general consensus.

<sup>53</sup> Panagiotakopulu 1995.

<sup>54</sup> Coriander grows in Egypt, and was imported in the Aegean. See 'ko-ri-a-da-na' in Linear B.

<sup>55</sup> Lucas 1948.

<sup>56</sup> As the insecticide in the granaries. Panagiotakopulu 1995.

<sup>57</sup> Merrillees 1972.

the fragrant woods of conifers and charcoal in the tombs<sup>58</sup>, and juniper berries were found in large quantities in a tombs of the eighteenth dynasty<sup>59</sup>. Their scope is unknown, yet you might remember the residues of juniper berries in the fireboxes of Mallia mentioned above.

Most of the Cretan flora is shared with the flora of the Syria-Palestinian coasts. The first depiction of an olive tree in the Egyptian world dates to the XIV century BC, on the wall paintings of Tell el-Amarna. This period coincides with the view of more intense relations between Egypt and the area of the Aegean. However, unless specified in the texts, it is not possible to draw conclusions on the provenience of a given plant material. Another instance is poppy (*Papaver somniferum*), coherent with Minoan practices, yet also growing on Cyprus.

In the records of Thutmose III, ‘sweet oil and green oil’ are regular tributes from Naharin, Retenu, and Syria, yet there are reasons to believe Cretan oils and the herbal knowledge behind their manufacture were not at all irrelevant in the Egyptian world<sup>60</sup>.

In the tomb of Thutmose IV, an arragonite vessel reports the inscription of <<*hs n kftiw*>>, translatable as “favour of Keftiu” or “paste of Keftiu”<sup>61</sup>. It is not utterly clear whether Keftiu stands for the consigner, the provenience of the substance, the name of the substance or the technique used to process it, but that name denotes an important connection, an element of recognition. The content of the vase is still unknown.

After all, it is not always needed to run GC/MS spectrometry and other analyses. On the one hand, there is the curiosity to taste the debris a vessel contains. On the opposite front, there is the Egyptian tendency<sup>62</sup> of recycling the vases, the traces of time<sup>63</sup>, the contamination, and the flawed interpretation of the scientist that can only give names<sup>64</sup> to what they had previously believed<sup>64</sup>.

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<sup>58</sup> Lucas 1948.

<sup>59</sup> Schiaparelli in Lucas 1948.

<sup>60</sup> On the LM Abbott vase found in Egypt, see Merrillees & Winter 1992.

<sup>61</sup> Merrillees 1972. Cline 2009.

<sup>62</sup> Merrillees & Winter 1972.

<sup>63</sup> There is the story of an Egyptologist who believed to have found coconut oil turned rancid because of the smell, that was actually due to the decomposition of a small proportion of nonoic acid: “What remains is generally only a part of that formed, and not necessarily a representative part” (Lucas 1948).

<sup>64</sup> Where is the molecule of silphium?

## Conclusions

*So be joyful!  
Ignorance is bliss!  
Follow your heart as long as you live!  
Put myrrh on your head,  
Wear fine linen,  
Anoint yourself  
with the real wonders that belong to a god!*

Harpist song from the tomb of King Intef,  
XVI century BC

Scents are ephemeral. The archaeologist unearthing fragrant jars of oils and resins from a prehistoric burial cannot any longer trust their own nose, as well as they cannot fully trust most analyses run by machines. Even if scents pointed to the right trail to follow, the one receiving the impression would not be able to communicate it to their fellows. This is the solitude of the researcher investigating the perfumes of the past, with no recipes nor epigraphic clues about the scopes of the industry. In the case of the Minoans, texts are undeciphered but above all lost on perishable materials, so is the destiny of all their most valuable productions. These were products of the earth administered by skilful hands: the spinning of the yarns, leather work soaked in oil vats, the chopping of the plants and mixture of their oils to apply on skin and burn, skin made containers and writing supports. All of these returned to earth and left no trace. Given that Keftiu is Minoan Crete in the Egyptian records, the existence of contacts between the pharaohs' kingdom and the island of the Aegean cannot be denied. References to botanical and medical knowledge ascribed to the Cretans do not pass unnoticed, although the survival of those few documents in which the land of Keftiu figures mostly serve to remind us of what we are still ignorant of. We cannot infer the relevance of their unique aromatics in the Egyptian rituals. We can only complete the picture with our own imagination.

Oils and herbal concoctions were needed for a great variety of purposes: magico-medical, as cosmetics and sun protection, insect-repellent, for the hygiene of the buildings, rites of passages, cooking, embalming, offerings, lighting. As recorded during the sixth campaign of Thutmose III, "*Behold, the army of his majesty was drunk and anointed with oil every day at a feast in Egypt*"<sup>65</sup>: oils can never suffice, till man is alive.

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<sup>65</sup> Breasted 1906, *AR*.

In the course of this essay peculiar aromatics from Crete have been taken into account:

- iris oil (produced since MM I times yet absent so far in Egypt);
- saffron, myrtle oil (present in the Minoan iconography, yet nowhere else; salicylic acid from myrtle could be used in the mummification);
- lily oil (flower motif steady in the Aegean iconography, oil absent in the archaeological remains of Crete, yet also produced in Egypt);
- lichen, laudanum, fragrant woods (assumed in the Aegean, and imported into Egypt)
- juniper berries (both present in the archaeological remains of Crete, and into Egypt).

However, their *uniqueness* in the eyes of the Egyptians will only be verified by the mouth of a mummy, through the discovery of new epigraphic material that explicitly confirms it. Yet the references to Keftiu so far in hand and the presence of the Aegean flora in the Egyptian burials might be genuine indicators of their importance. Questions certainly remain: whether the highest demand of Cretan exportations consisted in the finished product – the Cretan scented oils and concoctions –, or the raw materials – that is, the unprocessed herbs and fruits. Olive oil based perfumes were also produced on Cyprus, and Cretan flora is not much dissimilar from the Syria-Palestinian. Which is more accessible to Egypt. I believe the main elements of distinction in the Cretan production of aromatics were the techniques of cultivation, and their botanical knowledge, on which the Egyptian sources cannot give much credit in their writing, but still recognise at a distance.

More research is needed on plant migrations in the Bronze Age, on the cultivation techniques both adopted by the palatial organisations of Minoan Crete and by the independent farmsteads of the island, and Bronze Age herbal processing. An equally important research area is to investigate the sacred and non sacred Egyptian oils on Minoan Crete.

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## TABLE 1.

XVIII Dynasty of Egypt (New Kingdom): ~ 1550-1295 BC

Succession of main pharaohs:

**Thutmose II**, 1492-1479

**Thutmose III**, 1479-1425

**Hatshepsut**, 1473-1458

**Amenhotep II**, 1427-1400

**Thutmose IV**, 1400-1390

**Amenhotep III**, 1390-1352

**Akhenaten** 1352- 1336

**Tutankhamen**, 1336-1327

(Van De Mierop 2021)

## IMAGES



Figure 1: Map of Crete



Figure 2: Map of Egypt



Figure 3: Map of the Eastern Mediterranean



Figure 4: First representation of an olive tree in Egypt dating to the XIV century BC in Tell El-Amarna





*Figure 5: Keftiu in the tomb of TT86 of Menkheperresneb I*



*Figure 6: Keftiu in the tomb TT100 of Rekhmire*





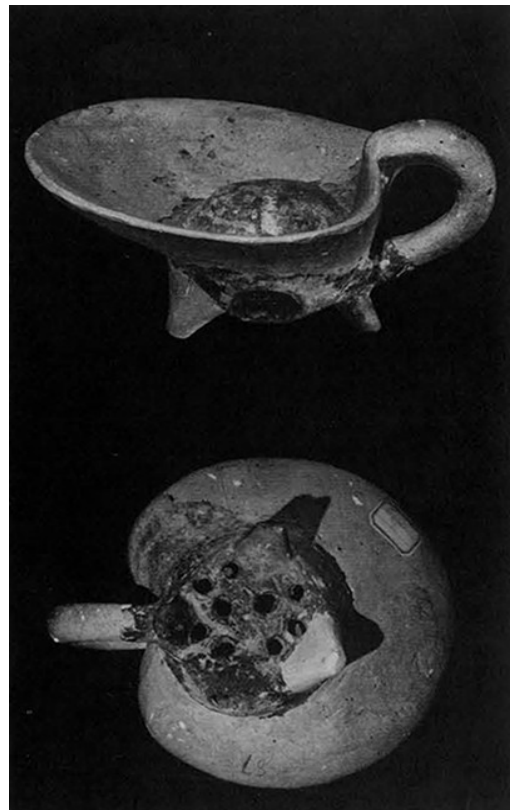
*Figure 7: From the Museum of Siteia: the lily inscribed ware from Mochlos and various fireboxes*



*Figure 9: Linear A on Pithos, Museum of Heraklion*



*Figure 10: Linen inscribed found in Thebes, Egypt, ~1550-25. Linen was certainly produced in Minoan Crete but its products could not have survived due to the climatic conditions of the island*



*Figure 8: Georgiou, "Minoan 'Fireboxes' From Gournia" Expedition Magazine 15.4 (1973)*





*Figure 11: Blue Bird fresco from Knossos: the rose on the left could be a cistus.*



*Figure 12: House of the Frescoes, Knossos: Olive Tree*





*Figure 13: Myrtle branch from Akrotiri*



*Figure 14: Fragment of the saffron gatherers of Akrotiri*



*Figure 15: Saffron gatherer of Knossos, Heraklion Museum*



*Figure 16: Same saffron gatherer from Knossos*