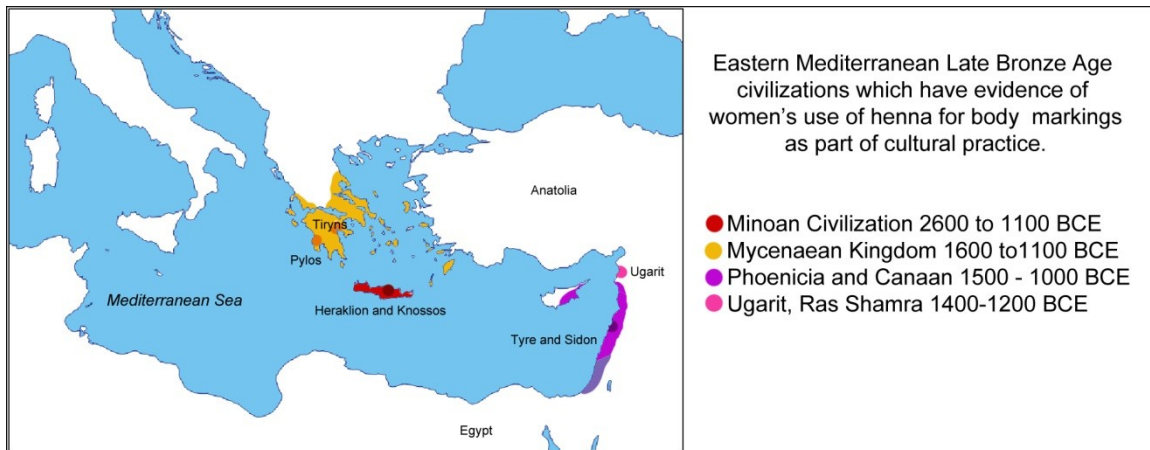


Ancient Sunrise® Henna for Hair Chapter 2, the History of Henna Hair Dye

Part 1: The Evolution and Migration of Henna into Cultural Practices

Section 5: Henna during the Late Bronze Age in the Mycenaean Eastern Mediterranean



Map of areas with text and artifact evidence of henna used as women's body art in the late Bronze Age in the Mediterraneanⁱ

During the Bronze Age, henna was used as a ceremonial women's skin stain in the Eastern Mediterranean and the Levant; this claim can be supported through analysis of translatable texts,¹ artifacts showing women with markings consistent with henna in wall paintings,² and numerous pottery figures of women with markings consistent with henna in the Levant and Arabian Peninsula, as detailed in Ancient Sunrise® Henna for Hair, Chapter 2, "Henna, Astronomy, and the Agro-Ecology of the Mediterranean Bronze Age," "Ancient Mesopotamian and Levantine Henna."³

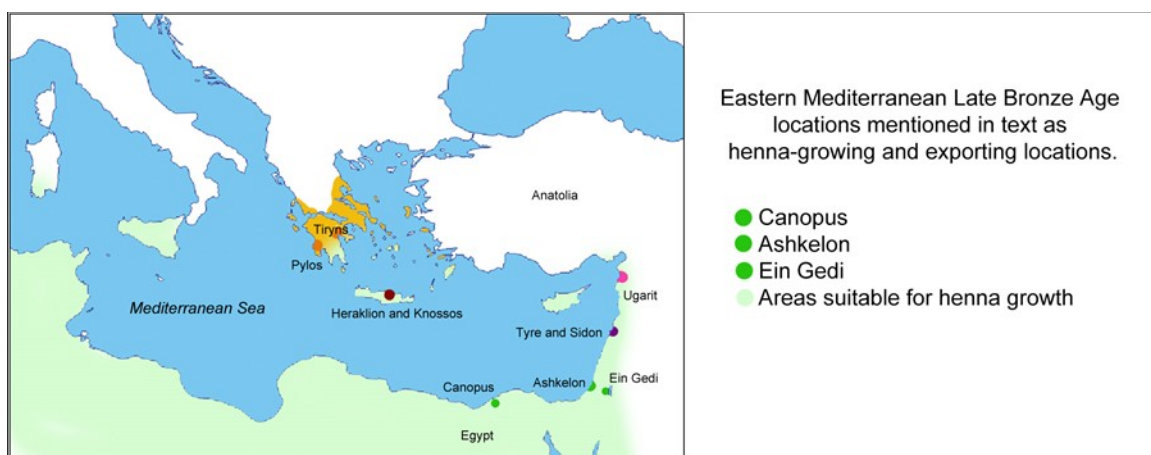
¹ De Moor, Johannes C. "The Seasonal Pattern in the Ugaritic Myth of Ba'lu According to the Version of Ilimilku" *Verlag Butzon & Berker Kevelaer*, Neukirchen – Vluyn, 1971 p. 85

² Xeste 3, "Lustral Basin" North Wall: Adorants, photograph by J Liepe, Coumas, 1992

³ Cartwright-Jones, C. (2016) *Ancient Sunrise® Henna for Hair Chapter 2, The History of Henna Hair Dye*, TapDancing Lizard, LLC

http://www.tapdancinglizard.com/AS_henna_for_hair/chapters/chap2/Mediterranean_Bronze.pdf and http://www.tapdancinglizard.com/AS_henna_for_hair/chapters/chap2/Meso_Levantine.pdf

The artifacts representing women with henna-consistent markings were in the cultural and trading networks of the Minoan, Phoenician, and Arabian people and in a climate zone that could support henna growth during that period. The locations of these figures with red-marked hands are also consistent with the areas where the agricultural year was dependent on seasonal rainfall rather than river and flood based irrigation for agriculture, as was Egypt. These artifacts and the belief system within which they were created existed in Crete, Cyprus, and the Levantine coast during a period when people noticed the correlation of the time when the constellations of the Pleiades and Taurus dipped below the horizon, signaling the beginning of summer drought.⁴



Map of henna growing and export areas during the Bronze Age as recorded in text, and regions with climate suitable for growing henna. Later cooling events reduced the frost-free climate zone southwards.ⁱⁱ

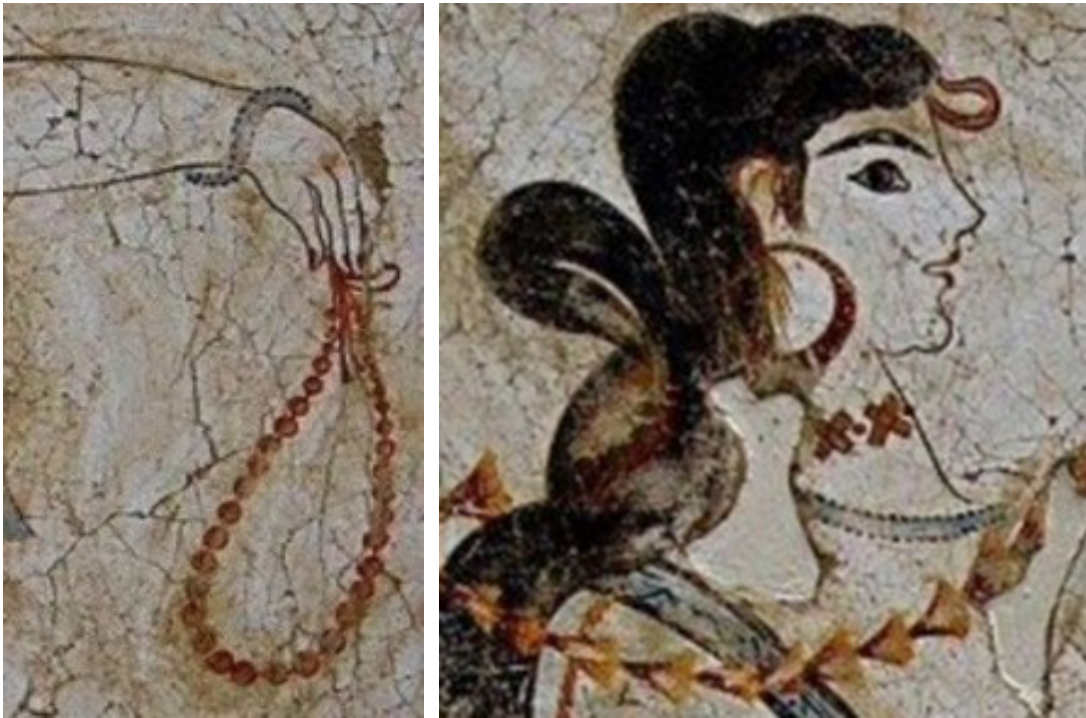
The volcanic eruption of Santorini⁵ between 1642 and 1540 destroyed many of the physical structures of the Minoan civilization. Subsequent earthquakes created tsunamis⁶ which damaged port cities of their trade allies in the Aegean region between 1630-1550 BCE. These events disrupted the Minoan culture which used henna for marking pubescent women as indicated in the

⁴ Ibid

⁵ Goodman-Tchernov, Beverly N., Hendrik W. Dey, Eduard G. Reinhardt, Floyd McCoy, and Yossi Mart. (2009) "Tsunami waves generated by the Santorini eruption reached Eastern Mediterranean shores." *Geology* 37, no. 10: 943-946.

⁶ Novikova, T., G. A. Papadopoulos, and F. W. McCoy. (2011) "Modelling of tsunami generated by the giant Late Bronze Age eruption of Thera, South Aegean Sea, Greece." *Geophysical Journal International* 186, no. 2: 665-680.

Lustral Basin wall paintings in the Palace at Heraklion dated to in 1680 BCE.⁷ The tectonic events that destroyed Knossos and other great Minoan cities did not have a direct effect on whether or not henna continued to grow in the Aegean and Levant, and whether people continued to make ceremonial use of it. The cultural use of henna continued in the area, as mentioned between 1450 BC and 1200 BC in Ugaritic texts of the legend of Baal and Anath.⁸



Two details of a Minoan woman with hennaed fingernails from the left side of the fresco, “Mistress of Animals” and Crocus Gatherer, Room 3a, first floor, north wall, and in “Lustral Basin”, North Wall, Adorants, Xeste III, at Akrotiri, dated prior to the eruption of Thera, 1642–1540 BCE.⁹ The red staining on her ears may indicate henna recently applied to hair.

The volcanic eruption ejecta may have affected the atmosphere and contributed to a cooling climate event which would have shifted the northern frost-free boundary henna growing area

⁷ Xeste 3, “Lustral Basin” North Wall: Adorants, photograph by J Liepe, Coumas, (1992)

⁸ De Moor, Johannes C. (1971) *The Seasonal Pattern in the Ugaritic Myth of Ba’lu According to the Version of Ilimilku*, Verlag Butzon & Berker Kevelaer, Neukirchen – Vluyn, p. 85

⁹ Xeste 3, “Lustral Basin” North Wall: Adorants, photograph by J Liepe, Coumas, (1992)

towards the south.¹⁰ The destruction of the Minoan center did not destroy knowledges and beliefs, but it did relocate them. If the volcanic event, tidal surges, and cooling destroyed henna habitat following the eruption of Santorini, migrating birds would have reestablished henna through seeds in droppings in their annual migrations northward from Africa as soon as the annual minimum temperature allowed the seedlings to sprout, take root, and not be killed in a winter frost.

The Mycenaean culture, relocating to the Greek mainland from Crete, expanded in wealth, commerce, and empire building beginning in 1550 BCE after the tectonic and volcanic disruption of the Minoan culture that occurred between 1642–1540 BCE. While different from its predecessor, Mycenaean culture remained closely culturally linked to the Minoan culture. There is text and artifact evidence that henna use as a ceremonial skin stain by women as seen in depictions in the Lustral Basin walls at Herakleion was continued in the Mycenaean culture.

Henna in the Perfume Industry of Mycenaean Pylos

The Mycenaean palace at Pylos had a perfume manufacturing center on its premises.¹¹ The location of a perfume manufacturing complex may have developed as part of the palace infrastructure because the government and ceremonial center was the only entity which had the financial means to collect rare materials, the knowledge of how to process these materials, literacy to keep records on the processing, and the ritual obligation to supply them for worship, ceremonies, and festivals.¹² Images of deities had to be adorned and venerated; important people had to be sanctified and anointed, quantities of sacramental anointments for festivals marking the sequence of the agricultural year had to be produced and distributed.¹³ Perfumes formulated with

¹⁰ Eastwood, W.J., J. Tibby, N. Roberts, H.J.B. Birks, and H.F. Lamb. (2002) "The environmental impact of the Minoan eruption of Santorini (Thera): statistical analysis of palaeoecological data from Gölhisar, southwest Turkey." *Holocene* 12, no. 4: 431-444.

¹¹ Shelmerdine, C. W. (1985) *The Perfume Industry of Mycenaean Pylos*, Studies in Mediterranean Archaeology, Paul Astroms Vorlag, Goteborg

¹² Hruby, J. (2006) *Feasting and Ceramics: A View from the Palace of Nestor at Pylos* Doctoral dissertation submitted to Division of Research and Advanced Studies of the University of Cincinnati p. 113

¹³ Shelmerdine, C. W. (1985) *The Perfume Industry of Mycenaean Pylos*, Studies in Mediterranean Archaeology, Paul Astroms Vorlag, Goteborg, p. 121

specialized knowledge and produced in amounts beyond that needed for local consumption could be exported and sold to bring back money to the Mycenaean government.¹⁴

The Mycenaean palace had rooms where herbs, roots, and oils were collected and stored; there was specialized equipment for grinding, concentrating, heating and mixing. These activities can be documented by the artifacts left from the collapse and destruction of the palace in a fire sometime between 1200 and 1230, in the early springtime.¹⁵ Written records of raw materials received, formulas, and finished goods dispersed were kept on clay tablets, the last of which were hardened and preserved by the fire which destroyed the palace. These tablets and contained formulae and inventories of a complex perfumery production.

Henna in the Minoan and Mycenaean Formulae

The Mycenaean tablets specify that henna was used in the production of three kinds of “red perfume.” Red-colored and rose-scented perfumes are frequently referred to in the Classical period. Finished red rose perfumes were produced and valued, and remained popular through the Classical Greek and into the Roman Empire. The ingredients of three Mycenaean “red perfumes” containing henna were identified both from tablets at Pylos and Knossos and were formulated with oil, honey, *cyperus* (henna), coriander, myrrh, and “*po-ni-ki-jo*.”¹⁶ The quantities of ingredients listed in these formulae were not given in proportion to each other, and some ingredients were understood, but missing from the text.¹⁷ Henna was only marginally growing in on the Greek coastline during the expansion of the Mycenaean empire, if growing at all. Henna was available from Mycenaean trading partners, Ashkalon on the Canaanite coast and Canopus in Egypt. The interpretation of what the characteristics of these perfumes were and how they were used has been frequently and inconclusively debated by scholars of ancient texts.

¹⁴ Ibid, p. 123

¹⁵ Chadwick, J. (1976) *The Mycenaean World* Cambridge. pp.191-192

¹⁶ Shelmerdine, C. W. (1985) *The Perfume Industry of Mycenaean Pylos*, Studies in Mediterranean Archaeology, Paul Astroms Vorlag, Goteborg p. 22-23

¹⁷ Ibid p. 21

Cyperus was listed as a red dye for wool by Democritus of Mendes and in the Papyrus Holmiensis. In these dyer's manuals, cyperus was described as being a lighter red than alkanet color, and that cyperus would turn quince-yellow with the addition of sodium carbonate.¹⁸ This is consistent with the characteristics of henna, *lawsonia inermis*. Cyperus, κύπρος, has been accepted as the word for henna by most classical translators. Cyperus is linguistically related to KPR in the Ras Shamra texts, kopher in Hebrew, and camphire in Latin, are also accepted as words referring to henna.

The perfumery produced sage-scented, rose-scented, and cyperus-scented (henna-scented) mixtures,¹⁹ though in the case of cyperus-scented, 'henna' was not the final scent of the mixture, that formula was described as 'without scent.'²⁰ Henna did not have a strong scent by itself, but was used as a base for other scents. The henna mixtures were thicker than other perfume oils.²¹ The henna mixture descriptor *a-ro-pa* or *aloipa*, stands in opposition *er-ra-wo*, an oil, and may the thickness that we would describe as a paste or poultice:²² the henna mixtures were an unguent for anointing.²³ Cyperus (henna) appears in three lists of ingredients, only one of which is recorded as a finished product in inventory; a finished product stored at the palace. Henna, cyperus, κρημνός, also κριμνός,²⁴ is identified as one of the plants being used in the Mycenaean perfume industry in the tablets that survived the fire that destroyed the palace, though there was

¹⁸ Henna stain on wool is reddest when the paste is mixed at pH 5.5, and is yellowish in an alkaline mix. Amro, I. H., James, K. C., and Turner, T. D., (1993). "A Quantitative Study of Dyeing with Lawsone," *Journal of the Society of Cosmetic Chemistry*, 45, 159 - 165

¹⁹ Shelmerdine, C. W. (1985) *The Perfume Industry of Mycenaean Pylos*, Studies in Mediterranean Archaeology, Paul Astroms Vorlag, Goteborg p. 19

²⁰ Ibid, p. 27.

²¹ Theophrastus (c. 371 - 287 BCE) and Dioscorides (c. 40 - 90 CE) "Two stages are involved, the first, stypsis, served to prepare the oil by the addition of weakly-scented astringents such as aspalathus, cyperus and ginger-grass. This treatment did not permanently scent the oil, but rather made it more receptive to the stronger fragrances which would follow... It also served incidentally to thicken the oil somewhat."

²² The understanding of 'perfume oil' should be more inclusive than what is available at a perfume counter in the 21st century. Contemporary with the perfume industry in Pylos, perfume in Egypt could be made with ox tallow, thick enough to be molded into cones and set on a person's head. to slowly melt into hair and release the fragrance. These can be seen in Egyptian wall paintings such as "Nebaumen's Banquet" 1350 BCE., detail from a fresco from the tomb of [Nebamun](https://upload.wikimedia.org/wikipedia/commons/a/a2/Nebamun_tomb_fresco_dancers_and_musicians.png). Thebes, Egypt, Dynasty XVIII. In the collection of the British Museum, London.

²³ Shelmerdine, C. W. (1985) *The Perfume Industry of Mycenaean Pylos*, Studies in Mediterranean Archaeology, Paul Astroms Vorlag, Goteborg p. 125

²⁴ Ibid. p 26. The spellings of κρημνός and κριμνός differ in among ancient writers, but modern translators have generally assumed that all refer to henna.

no record of a finished henna product being stored; this would be consistent with the mixed henna product being distributed soon after mixing.



Henna leaves and red henna attar pressed from red henna flowers: this red attar has a strong scent similar to that of roses, chocolate, and cigars.

The scent of henna flowers has long been esteemed. There are perfume oils made from henna flowers, including one that is reddish, made from henna flowers that are red rather than yellow, pink, or white. Shelmerdine makes the case that the Mycenaean henna perfume is created from the henna leaves,²⁵ not the henna flowers, because of problems in preservation during transport.

Henna would not have easily grown in Mycenaean Greece; it might have grown in coastal areas during a warmer climate period around 6000 – 2500 BCE. During the Mycenaean period, dried henna leaves would have easily been transported across the Mediterranean, henna from Askelon and Canopus. but not the fresh flowers. Henna leaves, however, could not have been easily used to color perfume oils. Henna leaves release the lawsone intermediate in acidic hydrolysis which oxidizes to brown when exposed to air. The red henna color is produced when the intermediate molecule binds to keratin: skin, fingernail, or hair. If the Mycenaean red perfume was red henna perfume oil made from red henna flowers, it would have to have been processed where the henna plants were growing and then imported; and that is not indicated by the written records from Pylos.

²⁵ Ibid. p. 31

The processed henna ‘red perfume’ is described as having no smell.²⁶ Crushed mixed henna leaf mixtures have a smell, but not a strong one, though henna stains on skin and hair have a very strong smell, strong enough for people to be opinionated about it: some people love the smell of hennaed hair and skin and others dislike the smell intensely.

***Poinikion* in the Minoan and Mycenaean Henna Formulae**

Poinikion,²⁷ or *po-ni-ki-jo*,²⁸ is also listed in the “red perfume” mixture. *Poinikion* was a word meaning “dark red.”²⁹ *Poinikion* was grown in ‘limited areas’ in Mycenae³⁰ and in the palace gardens at Minos. Cleland and Stears³¹ argue convincingly that *poinikion* was madder root rather than Foster’s³² interpretation that *po-ni-ki-jo* was alkanet. Madder root requires particularly fertile soil,³³ and so was grown in small, disperse patches.³⁴ Madder root, itself, could be used to make red perfume oil. If classicists and archaeologists interpret this as madder-infused perfume, what purpose was henna serving in that mixture? There may be an additional explanation of “red perfume,” rather than perfume oil infused with madder, a heavier unguentum (thick, used as a poultice) that was made with henna and enhanced with madder root for a more vivid red color. Mixing madder root into henna paste to push the orange-red henna color more to a cherry red color is not unknown in modern henna manufacture. When henna leaves have a 1% lawsone content or lower, the addition of madder created a cherry-red tone over the more orange henna stain. The more vivid red madder color lasts only a day or two because madder does not bind with keratin without prolonged simmering with an alum mordant. The henna color lasts three weeks on palms. It is possible that at least one of these “red perfumes” was used by women for

²⁶ Ibid: Fr 1209 and Fr 343, e-ti-we occurs with the OLE ideogram and without other adjectives

²⁷ Chadwick, J. (1976) *The Mycenaean World*. Cambridge University Press. p 120-21

²⁸ Knossos tablets dealing with perfume belong to the Fh, Fp, Fs, F, Ga, and Gb series, discussed by Foster 1977a, with references to earlier studies. Shelmerdine (1985) p. 23

²⁹ Chadwick, J. (1976) *The Mycenaean World*. Cambridge University Press. p 121

³⁰ Cleland, L., Stears, K., Davies, G. (2004) *British Archeological Reports International Series 1267* pp. 35-6

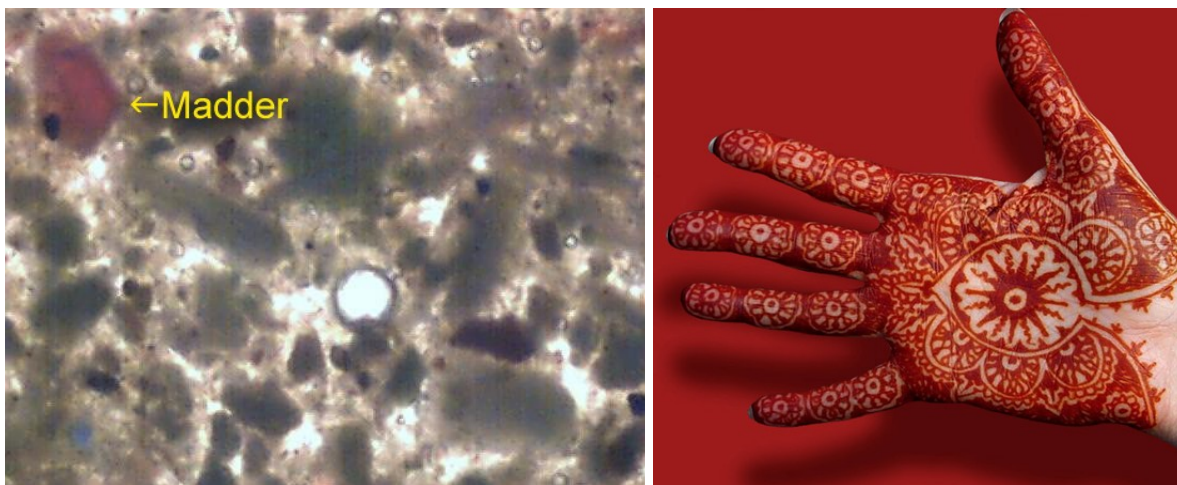
³¹ Ibid.

³² Foster, E. D., (1977), “po-ni-ki-yo in the Knossos Tablets Reconsidered” *Minos*, 16, pp 52-56 citing Theophrastus 31, 33; Discorides I. 43

³³ Cardon (1990) *Guidedes teintures naturelles plantes – lichens, Champignons, Mollusques et Insectes*. Neuchatel pp. 33-7

³⁴ Cleland, L., Stears, K., Davies, G. (2004) *British Archeological Reports International Series 1267* pp. 35-6

ceremonial skin markings, and that madder was mixed into a henna paste to make a particularly bright red stain in the first two days after application.



Left: 60x microscopy of henna with fragments of madder root Right: Unusually red henna stain from henna with madder, the vivid red faded on the third day³⁵

“Henna Affinity” Aromatics in the Minoan and Mycenaean Henna Formulae

Henna frequently appears in the Mycenaean perfume formulae with coriander and other aromatics, as *ku-pi-ri-jo*, “henna perfumed,” a phrase perplexing to Classicists such as Bubenik.³⁶ The aromatics were translated in KN G 517 and 646 as “henna-affinity,” a term also leaving Bubenik and others nonplussed. Aromatics with high levels of monoterpene alcohols change the oxidation characteristics of the red skin stain of henna and could be described as having a “henna-affinity” in that they combine with henna to make the stain color darker on skin. Both myrrh and coriander essential oils contain high levels of monoterpene alcohols and are used by present-day henna artists to create henna paste that stains skin a darker color than henna paste without aromatics.

³⁵ Microscopy and body art by Catherine Cartwright-Jones PhD, 2004

³⁶ Bubenik, V. (1974) “Evidence for Alašija in Linear B Texts.” *Phoenix* 28, no. 2 245-50.

The Mycenaean red perfume is described as “the red oil (or *unguentum*) which is not red,”³⁷ confounding translators. If “red perfume” has been created is henna paste containing (in descending order of ingredient amounts) cyperus, (henna leaf imported from Ashkalon or Canopus, finely milled and sifted at the perfumery), an unspecified liquid for mixing, “po-ni-ki-jo” (madder root) for adding a more vivid red color in the first forty-eight hours of stain, coriander and myrrh as the aromatics (the ‘henna affinity’) which help make a better henna stain skin, honey to make the paste hygroscopic enough to remain stuck to the skin longer and thus make a darker stain, and a small amount of oil as necessary to make a coarse textured paste more malleable for application, then Mycenaean “red unguent which is not red” would plausibly be a green henna paste which would leave a red stain on the skin (or hair) of the person to whom it was applied. The “perfume which is without fragrance”³⁸ *a-e-ti-to*, would leave a strong fragrance in the skin or hair which would last for about a week. The mixture itself would have been neither red colored nor especially fragrant. The skin stains would have been red and fragrant.

An Interpretation of the Minoan and Mycenaean Henna Formulae

In this interpretation of the records of Mycenaean red perfume containing henna, the ‘red unguent which is not red’ and the ‘perfume which has no odor’ are a plausible description of henna paste and its skin stain, well known to Bronze Age women in the Levant, but either unknown to or overlooked by academics from Northern Europe and England. In addition, tablets describing perfume manufacture process at the Archives Complex at Pylos include the descriptor “henna-dyed,” *e-ti-we lertiwenl*.³⁹ KPR, presumed to be henna, was translated by Pardee from Ugaritic as to be a “ransom, bribe, or fee,”⁴⁰ is consistent with henna being a marker of a bride

³⁷ Shelmerdine, C. W. (1985) *The Perfume Industry of Mycenaean Pylos*, Studies in Mediterranean Archaeology, Paul Astroms Vorlag, Goteborg p. 100

³⁸ Ibid p. 100

³⁹ Shelmerdine, C. W. (1997) “Review of Aegean Prehistory VI: The Palatial Bronze Age of the Southern and Central Greek Mainland.” *American Journal of Archaeology*, Vol 101, No 3, pp 537 – 585

⁴⁰ Gross, (1968) *Bulletin of the American Schools of Oriental Research*, 190 pp.44-46

price,⁴¹ as henna is mentioned by De Moor in context with brides.⁴² If a young woman were ceremonially anointed for marriage with this Mycenaean henna formula, she would have a fragrant red stain on her hands and soles that would last for about three weeks, and on her fingernails and toenails for about three months. The publicly visible henna stain signified that her betrothal was a choice to be viewed by both families and the community as a deliberate and legitimate union rather than a dalliance.

Henna was imported to Mycenae, even to the final days of the palace when trading in the eastern Mediterranean was increasingly disrupted⁴³ by the upheavals caused by the onset of climate change which caused a three hundred year period of severe cooling and drought.⁴⁴ Henna is recorded in the perfumery inventory tablets that were still damp clay at the time of the palace destruction by fire, and their texts have been preserved by the clay being hardened in the fire. This being the case, a demand for henna ‘red perfume’ was anticipated and henna imported into inventory. Perhaps this anticipated springtime betrothal and ceremonial use as described in the Legend of Baal and Anath. The potential destination of that henna can be corroborated in the Mycenaean “Psi” Ψ and “Phi” Φ figures of women.

Skin Markings Consistent with Henna in Mycenaean “Psi” Ψ, “Phi” Φ, and “Tau” T Figures

The use of henna in the perfume industry of Pylos⁴⁵ after the Minoan exodus and the Mycenaean rebuilding provides context for the interpretation of “Psi” Ψ and “Phi” Φ figures in Mycenaean culture, and the figures provide evidence for the preparation and use of henna through the

⁴¹ Pardee, D. (1987). "Ugaritic Bibliography." *Archiv Für Orientforschung* 34: 366-471.

⁴² De Moor, Or 37 (1968) 212

⁴³ Shelmerdine, C. W. (1985) *The Perfume Industry of Mycenaean Pylos*, Studies in Mediterranean Archaeology, Paul Astroms Vorlag, Goteborg p. 153

⁴⁴ Kaniewski, D., Van Campo, E., Guiot, J., Le Burel, S., Otto, T., and Baeteman, C. (2013). "Environmental Roots of the Late Bronze Age Crisis." *Plos ONE* 8, no. 8: 1-10

⁴⁵ Shelmerdine, C. W. (1985) *The Perfume Industry of Mycenaean Pylos*, Studies in Mediterranean Archaeology, Paul Astroms Vorlag, Goteborg

perfume industry. The Mycenaean “Psi” Ψ and “Phi” Φ⁴⁶ statuettes of young women with marked raised hands and texts mentioning henna use the eastern Mediterranean area following eruption of Santorini, supporting the continuation of henna use by women in Mycenae after the 1642–1540 BCE depictions in the Lustral Basin at Herakleion and before the description of women applying henna before they went to seek their husbands in the 1400-1200 BCE Ras Shamra texts.⁴⁷

The cheek markings on the Mycenaean Late Helladic (LH) III B2 (1250-1180 BCE) female figures are unlikely to have represented henna. Henna does not leave a vivid stain on facial skin. Other red cosmetics such as rouge were made with minium,⁴⁸ a naturally occurring form of lead tetroxide, $Pb^{2+}_2Pb^{4+}O_4$, also known as red lead, which would be a candidate for the facial markings. Lines on wrists and throats are more likely to represent jewelry. The breast markings on a the Tau figures, figures are often interpreted as “nursemaid of the gods” figure (a woman offering her full, lactating breasts) might be related to henna: henna is anti-fungal and analgesic, and can eliminate thrush transmission between a mother’s breasts and a child’s mouth, as well as reducing the pain with lactation engorgement. Whether the use of color on the breasts directly linked to lactation or to draw attention to them and whether or not the color may indicate the use of henna on breasts as wellness management is moot.

The finger markings on the following Mycenaean statues are consistent with henna stains, and are consistent with the mention of the brides, or seven sisters, being hennaed in the “The Seasonal Pattern in the Ugaritic Myth of Ba’lu According to the Version of Ilmilku.”

⁴⁶ Ψ, the Greek letter ‘psi’ and Φ, the Greek letter ‘phi’ are used to categorize these figures of women. Psi figures frequently have arms broken from age, or deliberately shortened by the artist to prevent breakage. The glaze that might indicate henna use is frequently missing because the coefficient of expansion of clay body and glaze are different, thus the glaze flakes off over centuries.

⁴⁷ De Moor, Johannes C. (1971) “The Seasonal Pattern in the Ugaritic Myth of Ba’lu According to the Version of Ilmilku” *Verlag Butzon & Berker Kevelaer*, Neukirchen – Vluyn, p. 85

⁴⁸ Sotiropoulou, S., V. Perdikatsis, Ch. Apostolaki, A.G. Karydas, A. Devetzi, and K. Birtacha. 2010. "Lead pigments and related tools at Akrotiri, Thera, Greece. Provenance and application techniques." *Journal Of Archaeological Science* 37, no. 8: 1830-1840.



Images on the left:

Left figurine: Terracotta “psi,” Ψ , female figure, hands raised and displayed, fingers with colored markings consistent with henna stains; Mycenaean, Tiryns, 12th C BC, Nafplio Archaeology Museum, Greece⁴⁹ Right figurine: Terracotta “phi” Φ or “tau” T female figure, hands raised and displayed, fingers with colored markings consistent with henna stains; Mycenaean, Tiryns, 12th C BC, Nafplio Archaeology Museum, Greece

Images on the right:

Left figurine: Terracotta “tau” T female figure Mycenaean female figure holding breasts, fingers with colored markings consistent with henna stains; Late Helladic (LH) IIIB2 (1250-1180 BCE). Breast markings are potentially consistent with henna stains. Right figurine: Mycenaean Terracotta “psi,” Ψ , female figure, hands markings consistent with henna stain, Terracotta, 1259-1200 BC. Breast markings are potentially consistent with henna stains.

The females holding their breasts may have a different interpretation: they may be a stylized image of the maturing body of a girl as she passes into puberty, marked as *Kanephoros* (the

⁴⁹ Cox, D. (2015)

bearer of the basket)⁵⁰ for the major festival of Athena, the Panathenaia. Being allowed to bear a basket was a marker of a girl's maturity: she was no longer a scampering, stumbling, straying child; she could be entrusted to carry a basket full of goods on her head without spilling it. Much of a woman's life involved carrying necessities, food and water, on her head between her home and a well, the fields, or the market. A girl, whose maturation, at approximately age twelve, before the average first menstrual cycle at age fourteen, was evidenced by the pre-pubescent swelling of her breasts. This hormonal change indicated that it was time to instruct her in women's knowledge of her body's and her land's fertility, and the technologies necessary for her to maintain a well-managed household. It may be inferred from these images that having henna body markings was associated with this event. Though there may have been larger cult figures with this imagery, these small *Kanephoros* figures may have been treasured, but were ultimately disposable mementos of a girl's life.

These figurines were mass produced,⁵¹ and not ritually sacred. They were usually set in household niches. When chipped or broken they were discarded to the local rubbish tip,⁵² rather than being ritually disposed of as a sacred icon of a goddess would have been. The hand markings on these figures implies that henna, the Mycenaean "red perfume" was used as a sort of merit badge of maturation or accomplishment for a girl. These figures occur all over the Mycenaean, Phoenician, and Punic world, and span over a thousand years.⁵³

⁵⁰ Håland, E.J., (2012) "The Ritual Year of Athena: The Agricultural Cycle of the Olive, Girls' Rites of Passage, and Official Ideology" *Journal of Religious History*, Vol 36, No. 2

Women also played a major role during the other festivals dedicated to Athena, particularly during parts of the Panathenaia and its preliminary rituals. Aristophanes' *Lysistrata* tells how the Athenian girls moved up from behind-the-scenes preparation for the Panathenaic festival to actual participation in the procession. "When I was seven, I was *Arrephoros*. At ten I was *Aletris*" (i.e., ground grain for the sacred cakes for Athena.¹² "Next, as a fair young girl, I was *Kanephoros*" (i.e., bearer of a basket). The *Arrephoroi* were two or four little girls, selected from aristocratic families by the Archon Basileus (king archon/magistrate) to live on the Akropolis in a house in, or rather in the neighbourhood of the Erekhtheion temple, and to serve Athena for a year. They got their name, "bearers," or "maidens who carried the symbols of Athena Polias in procession," from the fact that they carried closed baskets (*kistai*) with secret objects.

⁵¹ Linder, E. (1973) "A Cargo of Phoenicio-Punic Figurines" *Archaeology*, Vol. 26, No. 3 pp. 182-187

⁵² Iouliia Tzonou-Herbst, I. (2007) *Trashing the sacred: the use-life of Mycenaean figurines* Corinth Excavations *American School of Classical Studies Ancient Corinth*
https://www.academia.edu/5206875/Trashing_the_Sacred_the_Use-life_of_Mycenaean_Figurines

⁵³ Elayi, J. "An Unexpected Archeological Treasure: The Phoenician Quarters in Beirut City Center" *Near Eastern Archeology*, 73: 2-3, 2010, pp 156 - 168



Left: “Psi” figure of woman raising hands with palm and fingertip markings consistent with henna, from the Little Palace, Knossos Post-Palace Period, Mycenaean period 1400 – 1100 BCE Gallery X, Case 140, figure 46, Heraklion Museum, Greece.⁵⁴ Right: The female figure with crossed hands over her breasts, knuckle and finger with markings consistent with henna, Late Helladic (LH) IIIB2 (1250-1180 BCE) (Private archive A. Flamee)⁵⁵

The use of henna as a signifier of a young woman’s maturation and worth was widespread and enduring. Not all psi, phi, and tau figurines have red markings on their hands, but these markings are visible on many of such. Markings which originally existed as iron oxide painted onto terracotta may have eroded over the centuries because of the different coefficients of expansion between glaze and clay body.

⁵⁴ Sakellarakis, J.K., 1983, *Herakleion Museum, Illustrated Guide to the Museum*, Ekdotike, Athenon, S.A., Athens.

⁵⁵ Trckova-Flamee, A. PhD, (2005) *The Mycenaean Terracotta Figurine from the Royal Museums of Art and History in Brussels*. ANISTORITON: *ArtHistory* Volume 9, September 2005, Section O053

A Mycenaean Sage-Scented Henna Perfume for the Poseidon Festival

A sage-scented henna mixture was produced annually in the Mycenaean palace at Pylos for the *Thornohelkterion* Poseidon Festival,⁵⁶ and was distributed, with other goods to the populace celebrating the festival,⁵⁷ tablets translated from Linear B by Shelmerdine as follows:

1216.1 and 1216.2:

to the *pakijan*-ians, sage-scented

To the *dipsoioi* for *wanax*⁵⁸

1220.1:

to the Lousian field, sage-scented

1222.a:

Oil

to the *wanasoi* for the (festival) *thornohelkterion*

1224.a:

In the month of *pakijana*, to Poseidon

Sage-scented henna-dyed oil

1226.1 and 1226.2:

to the Lousian field for the gods, sage-scented oil

1228:

To the *wanasoi* for *eredē*

A sage-scented henna mixture was prepared by the perfumery, and distributed to honor Poseidon, other deities, and guests of the festival.⁵⁹ These inscriptions could be viewed in context of the later Greek Poseidon festival and with the presumption that the sage-scented henna mixture was

⁵⁶ Shelmerdine, C. W. (1985) *The Perfume Industry of Mycenaean Pylos*, Studies in Mediterranean Archaeology, Paul Astroms Vorlag, Goteborg, p. 71

⁵⁷ Hruby, J. (2006) To-no-e-ke-te-ri-jo (Thornohelkterion) palace contributions to a feast

Feasting and Ceramics: A View from the Palace of Nestor at Pylos Doctoral dissertation submitted to Division of Research and Advanced Studies of the University of Cincinnati p. 113

⁵⁸ *Wanax* is a head of state or representative of deity Lupak, S. (2014) "Offerings for the Wanax in the Fr Tablets: Ancestor Worship and the Maintenance of Power in Mycenaean Greece, *KE-RA-ME-JA: Studies Presented to Cynthia W. Shelmerdine*, The Institute for Aegean Prehistory, Chapter 13.

⁵⁹ *Ibid.*

intended to mark skin. If the palace perfumery used a wild Greek sage similar in chemical attributes to Dalmatian⁶⁰ sage, the perfumers could have extracted concentrated henna-affinity” essential oils⁶¹ to formulate henna paste for marking skin. These “sage-scented” constituents that would have made a more vivid stain in a henna unguent (paste) prepared for use on skin, which would then be “Sage-scented henna-dyed” and distributed “to the Louisan field for the gods.”

In addition to the sage-scented henna distributed to the Poseidon festival, a rose-scented henna perfume also produced.⁶²

1231.1, 1231.2, and 1231.3

to the *dipsioi*⁶³ for Potnia

for guests (?)

1238.1

rose-scented oil⁶⁴

⁶⁰ Stešević, D., Ristić, M., Nikolić, V., Nedović M, Caković D, Šatović Z. (2014) “Chemotype diversity of indigenous Dalmatian sage (*Salvia officinalis* L.) populations in Montenegro.” *Chemical Biodiversity*. 2014 Jan;11(1):101-14

From abstract, “Among the 40 identified constituents, the most abundant were cis-thujone (16.98-40.35%), camphor (12.75-35.37%), 1,8-cineol (6.40-12.06%), trans-thujone (1.5-10.35%), camphene (2.26-9.97%), borneol (0.97-8.81%), viridiflorol (3.46-7.8%), limonene (1.8-6.47%), α -pinene (1.59-5.46%), and α -humulene (1.77-5.02%). The composition of the essential oils under study did not meet the ISO 9909 requirements, while the oils of populations P02-P04, P09, and P10 complied with the German Drug Codex. A few of the main essential-oil constituents appeared to be highly intercorrelated. Strong positive correlations were observed between α -pinene and camphene, camphene and camphor, as well as between cis-thujone and trans-thujone. Strong negative correlations were evidenced between cis-thujone and α -pinene, cis-thujone and champhene, cis-thujone and camphor, as well as between trans-thujone and camphene. Multivariate analyses allowed the grouping of the populations into three distinct chemotypes, i.e., Chemotype A, rich in total thujones, Chemotype B, with intermediate contents of thujones, α -pinene, camphene, and camphor and high borneol contents, and Chemotype C, rich in camphor, camphene, and α -pinene. The chemotypes did not significantly differ in the total essential-oil content and the cis/trans-thujone ratio.”

⁶¹ The essential oils are popularly known to modern henna artists as “terps,” a term coined in 2000 by Catherine Cartwright-Jones PhD. to refer to the essential oils which have high monoterpene alcohol contents. Monoterpene alcohols added to henna paste have the effect of rapidly darkening the stain color by enhancing the oxidation of henna stain on less keratinized skin (not palms and soles).

⁶²Shelmerdine, C. W. (1985) *The Perfume Industry of Mycenaean Pylos*, Studies in Mediterranean Archaeology, Paul Astroms Vorlag, Goteborg, p. 72

⁶³Dipsioi: “the Thirsty and hence the Dead Ones” Marinatos, Spyridon (1966). “Πολυδίψιον Ἄργος”. In Palmer, L.R.; Chadwick, J. *Proceedings of the Cambridge Colloquium on Mycenaean Studies*. Cambridge University Press. pp. 265–274.

⁶⁴Authors note: I have not been able to find any improvement roses would bring to the chemistry of henna stain, but the addition of rose water to henna paste smells lovely.

The winter solstice Mycenaean *thornohelkterion* festival for Poseidon was held when the fleets had to return to port in the winter when the Mediterranean Sea was too stormy to risk sailing. If it was celebrated in a way similar to the later Greek Poseidon festival,⁶⁵ there was a period of lascivious celebration of sailors returning to wives and lovers on shore.⁶⁶ Celebratory henna markings, associated with betrothal in Minoan and Phoenician culture, seem plausible for the celebration of husbands returning to wives after an extended absence at sea. This parallels the myth narrating the return of the rains, the return of Baal, the bull god that brought the rain, to his consort, Anath, bringing fertility back to the earth after the summer drought.



Mycenaean rhyton in the shape of a bull's head, 1300–1200 BC (Late Helladic IIIb) found in a tomb on Karpathos. British Museum, Main floor, room 12, Greece: Minoans, GR 1887.5-1.6 (Cat Vases A971)

As there are records of bulls dedicated to Poseidon and being offered in sacrifice at this festival,⁶⁷ were the bulls also hennaed, and are the markings on this Mycenaean bull head evidence of henna ceremonially staining the hair and horns of a bull?

⁶⁵ Robertson, N. (1984) "Poseidon's Festival at the Winter Solstice," *The Classical Quarterly*, New Series, Vol. 34, No. 1, 1-16.

⁶⁶ *Ibid*, p 5

At Eleusis there was a festival called Haloea on the 26th of the month Poseideon. The Haloea, a festival for Demeter and Dionysus, included a procession for Poseidon. The Haloea is thought to have been a time for merriment. There is mention of a women's rite in connection with this holiday: Women are provided with wine and food, including cakes in the shapes of sexual organs. They withdraw to themselves and "exchange scurrilous banter, and are teased with suggestions of promiscuity whispered in their ears by 'the priestesses'." The women are thought to have stayed secluded throughout the night and then to have joined the men the next day. While the women were off eating, drinking, and sounding much like the women of Lysistrata, the men are thought to have created a big pyre or a bunch of little bonfires.

⁶⁷ Dimitri Nakassis, Joann Gulizio, Sarah A. (2014) KE-RA-ME-JA: Studies Presented to Cynthia W. Shelmerdine James Prehistory Monographs (Book 46) p. 166

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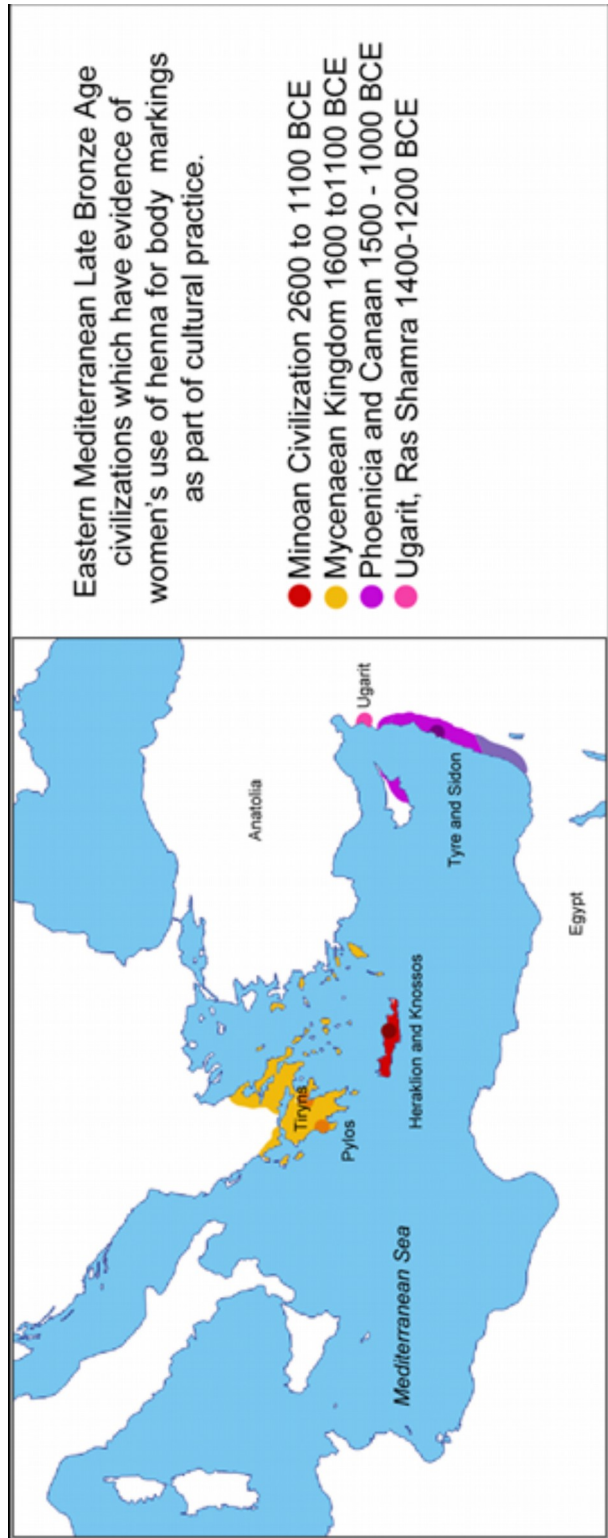
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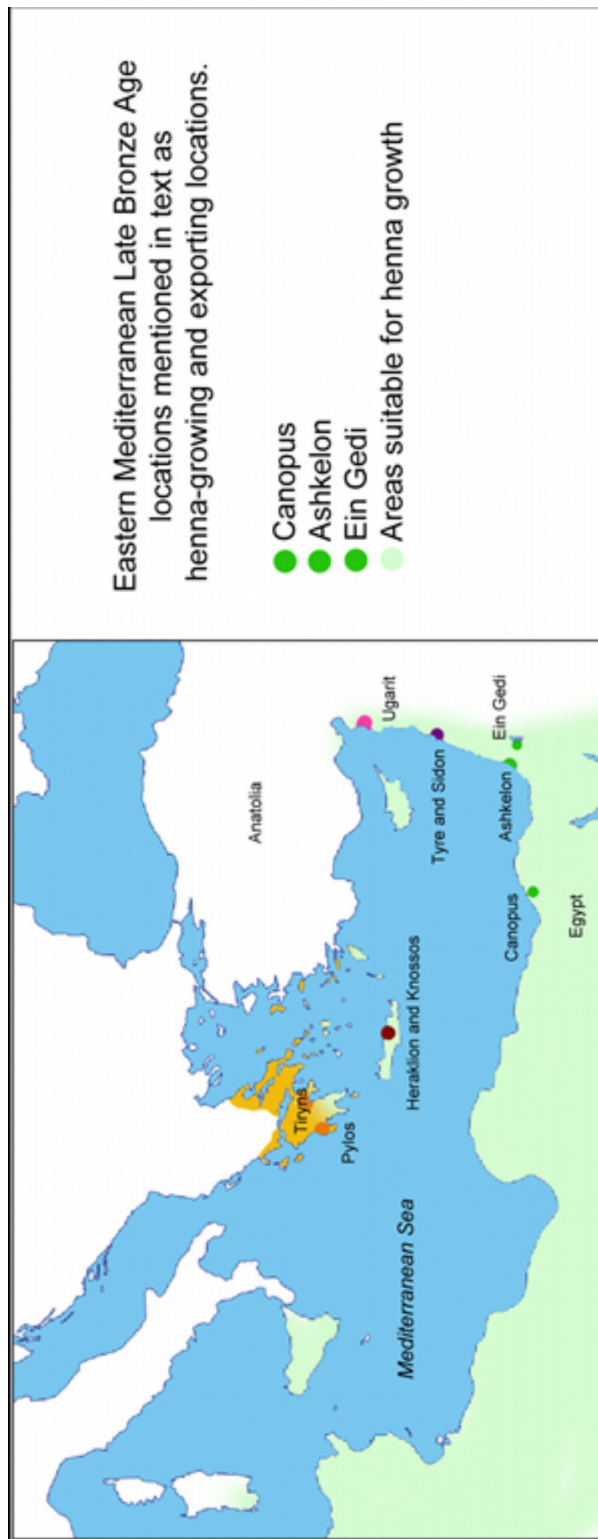
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Map of areas with text and artifact evidence of henna used as women's body art in the late Bronze Age in the Mediterranean



Map of henna growing and export areas during the Bronze Age as recorded in text, and regions with climate suitable for growing henna. Later cooling events reduced the frost-free climate zone southwards.