Cleopatra's Brassiere (or, Crackpot Theory #36D)

I have studied an island up Canada way
In the northwestern part of the cold Mahone Bay.
And the clues that I've found make it perfectly clear
Oak Island conceals Cleopatra's brassiere.

The late queen of Egypt owned garments of gold
Among them, a gold-plated bra that was sold
To some Portuguese sailors by Cleo's handmaid
I've never determined the price that they paid.

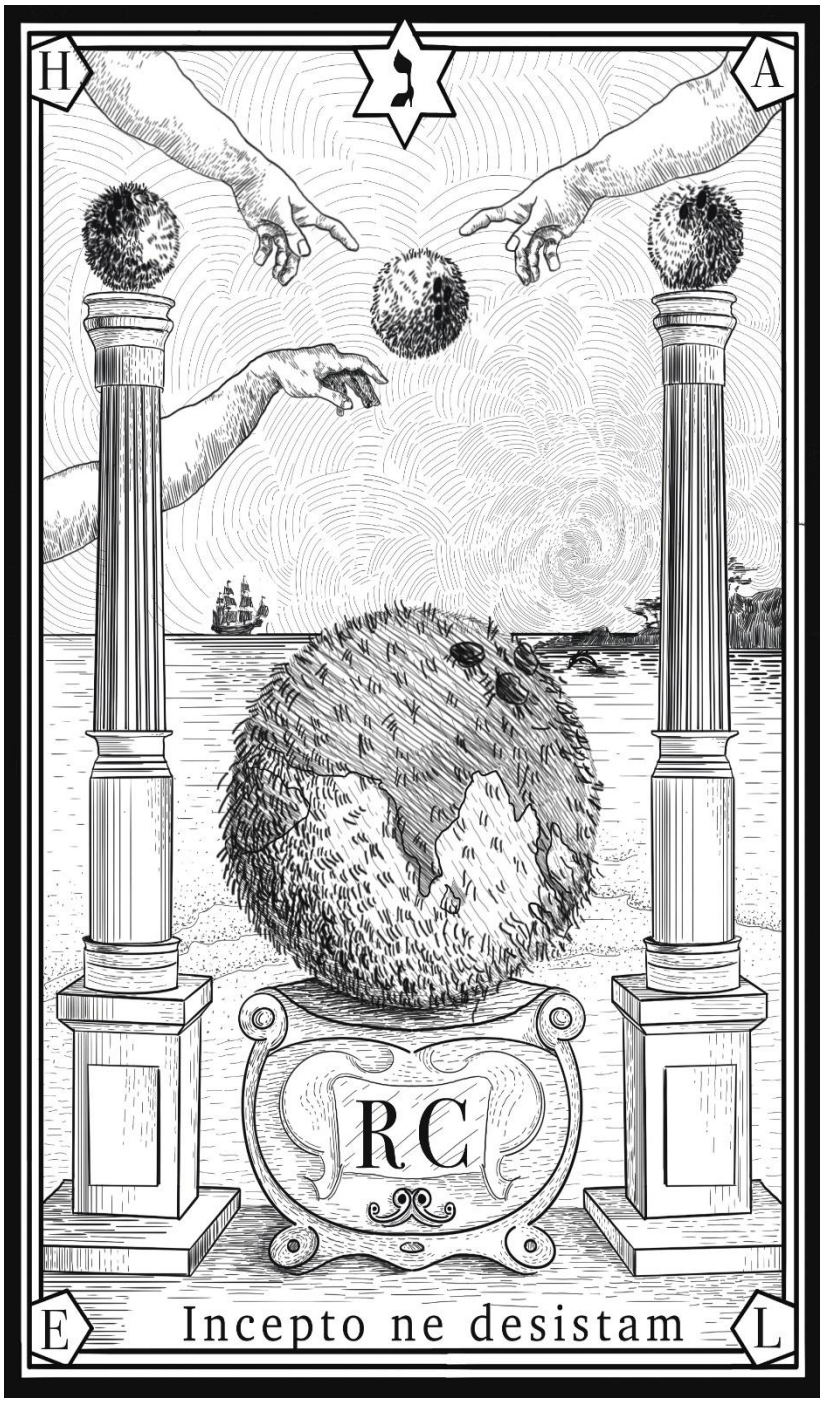
The treasure was guarded down through many years
By sailors who hoarded such things as brassieres.
At last they determined to hide underground
The treasure so deep it might never be found.

They dug many tunnels to daze and confuse
All the gold-digging, bra-hunting searchers of clues.
They dug through the mud and the clay and the grime
And the work it was hard and it took a long time.

Yes long did they labor with shovels and picks
To build in the traps and the floods and the tricks.
But to them it was worth all the blood sweat and tears
To keep hidden away Cleopatra's brassiere.

And right to this day no one's found any trace
Though they've dug up Oak Island all over the place.
But the Dream keeps them coming back year after year
To hold in their hands Cleopatra's brassiere.

Joe Urbanski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Chapter Three

HERE'S A COCO, THERE'S A COCO, NOWHERE IS A COCO

The truth is, sometimes searching for the facts on a topic can be quite a challenge with the agendas, biases, and the infiltration of misinformation. More often than not, what was thought to be accurate, is a fallacy, passed around like a bottle of rotten wine. Yet everyone thinks that bouquet indicates a very good year. No - *it's scat!* Then there are those who push a narrative or look at facts through a clouded lens with an assumptive bias. Some do it to be the smart kid on the block, fill a column in an article, or to rack up accolades and professional prestige. Either way the outcome is the same. Only when we carefully investigate, do we discover the truth about a lot of things we once thought to be factual.

Unfortunately, we find history itself is replete with observation, deduction, and recordation which got the facts wrong. These errors create a ripple effect which spawn a litany of myth and misunderstandings of the evidence. The coconut history was not immune from such perturbations.

Luckily, I knew little on the topic so there was nothing coloring my investigation. When you don't know much about a topic to begin with, you most assuredly have to start with the basics. The more research and examination, the more I saw flaws and fallacies to the common knowledge about these fibers and coconuts in general. In some cases I had to prove negatives – exhaustive research to prove a commonly held belief was a complete myth or misunderstanding and never happened.

That wasn't what I had intended to spend my time doing. I just wanted to understand why such ancient organic fiber was found so far away from their origin and on this one puny island.

Soon this led to reading research papers written by archeologists, archaeobotanist, ethnobotanists, papyrologists, geoscientists, anthropologists, agronomists, metrologists and of the phylogeny and history of all things dealing with *Cocos nucifera* and more. My wife and friends now believe I've become obsessed. *Most likely*.

This third book of the series ***Oak Island Mystery Trees and other Forensic Answers*** is the final researched volume to satisfy my initial curiosity of why that mystery fiber was found within Oak Island. This chapter presents the truthful facts surrounding those myths and misinformation frequently available about coconuts and its palm tree. The effort goes back much earlier than the history of the Oak Island fibers. Whereas the breadth of the other volumes have forensically provided evidence of the facts about the coconut, here we will identify the sources of falsehoods. Hopefully, this review will allow you to recognize why this artifact was never given the due attention deserved.

In our research on all things coconut – we have found many examples of published erroneous statements and determinations dating back to ancient Greek and pharaonic times, up to the current rewriting of history to infuse 'equity' and counter perceived 'gender bias.' One would think the topic of coconuts would float above the fray. But once the facts become sullied, then from there the foundation of truth becomes weakened, unless pointed out and corrected.

This is indeed the situation one finds themselves with pronounced "factual" publications produced by Artificial Intelligence (AI). Who's to say? A recent book about the Oak Island Treasure Saga, written by AI, was in fact a dustpan of bits of "factoids" swept up into novel form and announced as the solution to this ancient mystery. It was a scary disappointment to say the least.

If this book suffers from poor grammar and writing style, and a wandering outline, I plead the fifth! However, The one thing this book provides the reader in this search for the truth, are all the citations of the researched material, allowing you the reader to do due diligence, and not take my word for it. Look it up yourself!

Coconut Contrivances

Weed whacking our way through the world of coconuts, history was replete with statements, commentary, and even stated fact, which the analysis showed was not true. Not to throw aspersions, but these writings were wrong. Sure, many a historical anecdote was corrected with additional investigation brought forward with modern research. Consensus on some have dictated history rewrite these moments, and we move on. Others, however, seemed in fact contrived. I will let you decide the motive.

Here we will first summarize many examples of when science has corrected the ancient historical record on the extent of the Coconut Palm and their coconuts, and then we too will move on.

Seminal Science

The answers to *how* and *why* coconut coir fiber found its way to Oak Island is based on access, timing and geography. Our research reflects it did not come from sources in and around the Caribbean or Mediterranean basins, nor accessed from eastern Africa, Arabia Felix, nor the Persian Gulf region. We deduced if it was coconut coir fiber (CCF) it came from India. Yet many historical inaccuracies have biased some people to be skeptical of our provable conclusions. Therefore, we are here to point out and reflect the current scientific corrections to many historical records.

Archaeobotanical and ethnoarchaeological excavations at ancient Egyptian and Roman trade ports on the Red Sea and elsewhere, provide many insightful corrections to the historical record related to palms. This document is critical to understanding the truth of Egyptian, Roman and Greek writings as they pertain to access to the *Cocos nucifera*.

For brevities sake, we will only list the error (underlined), the correction and the citation of the error. Further discussion and persuasion of these historical inaccuracies and reasoning for their correction are provided in the chapters endnotes and within the cited references.

No. 1

> "*It has frequently been suggested coconut oil was present in Egyptian tombs. According to Lucas and Harris (1962:88, 328–329), this assumption is wrong, because the strong smell is due to a very small proportion of nonoic acid, which had been formed as a result of decomposition of fatty materials.*" [1, 2]

No. 2

> *"The higher class considered Ancient Egypt imported coconuts as luxury goods. It was costly, and even the higher class did not have much of it. However, the documentation of fruits in Egyptian tombs shows the variety of fruits present, was vast."* [3,4]

No. 3

> *"Pharaohs might be buried with their favorite perfumes and oils, made from the most expensive materials. In Tutankhamun's tomb, there was still a little bit of perfume left in one alabaster bottle. Archaeologists did tests and found out that it was made from coconut oil and frankincense."* [5, 6]

In all tomb excavations within the sands of Egypt, **no coconut** products have yet to be found.[7, 8] Though remnants of dates of the *Medemia argun* and the Doum Palm were frequently found in tombs.[9, 10]

Through military dominance abroad, the Pharaohs of the New Kingdom saw Egypt's greatest territorial extent. It expanded far into Nubia in the south and held wide territories in the Near East. Egyptian armies fought with Hittite armies for control of modern-day Syria.[11] The third ruler of the 18th Dynasty was Thutmose I, who ruled from 1520-1492 BC and started a family reign which lasted for 175 years. He defeated the Kingdom of Kush and destroyed parts of Nubia and controlled territory as far away as the Euphrates River. He was the father to his son Thutmose II who ruled from 1492-1479 BC, and his daughter Hatshepsut, who held the title of Pharaoh jointly with her nephew, Thutmose III. She is believed to be the second female Pharaoh in dynastic history, and famous for her trade expedition to the land of Punt and building the Mortuary Temple at Deir el-Bahari. Her reign was 1479-1458 BC. Thutmose III ruled from 1458-1425 BC, and extended Egypt's sovereignty to its greatest height and territorial

control; which would include the Levant and Nubia.[12] Thutmose family clan was very interested in establishing new and exotic plants to bolster Egypt's agronomy and display what they had seen during their victories. Throughout the conquered territories, they brought back or scribed images of a wide assortment of fauna and flora as the spoils of their conquests. They all built elaborate temple garden complexes featuring bass-relief images of plant and animal life depicted on the temple walls.

Also at Deir el-Bahari, are illustrations which include depictions of Hatshepsut's expedition to Punt and the trade compact allowing her to bring back Myrrh and Frankincense trees from Punt.[13] Such a trade agreement marks the first recorded importation of live trees for silviculture development.[14]

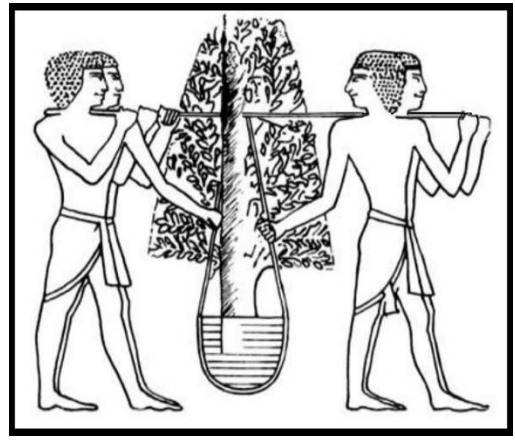


Fig. #1.
Hatshepsut –
The Female Pharaoh.
Courtesy Tyldesley.[15]

This is also the initial period where Coconut Palm misidentification by chroniclers, classical historians and botanists happened in describing plants, seeds & location.

No. 4

"There were no Coconut Palm Trees depicted in the images found in these Pharaonic garden temples or in their complexes." [16]

A true statement.

The botanical misidentification would continue into Roman rule of Egypt as both Greek and Roman writers would get duped by the drupes of the Mid-East. Palms native to this region were Date Palm *(Phoenix dactylifera)*, Doum Palm *(Hyphaene thebaica)* and Argune Palm *(Medemia argun)*; not the Coconut Palm *(Cocos nucifera*).[17, 18]

Fig. #2 Date Palm [19]

Fig. #3 Doum Palm [20]

Fig, #4 Argune Palm [21]

In 1140 BC, an Egyptian heavyweight deity was ***Thoth***, God of Wisdom and Writing and Escort to the life of the Underworld.[22] One such prayer to the mighty Thoth was found written on papyrus and is known as 'Sallier 1.' There were many daily ritual prayers in Egypt at that time. The Thoth Papyrus mentions the important Doum Palm for all that it gives to man.[23] If one just read the description of the Doum Palm fruit in the text, you can see perhaps why it was misinterpreted as the seed of a Coconut Palm. Below are the hieroglyph symbols of the Sallier 1 papyrus and the translated prayer to Thoth after it.

Fig. #5. **Sallier I Thoth Prayer.** Courtesy Robert Myers.[24]

"O great doum-palm sixty cubits high,
The one with nuts upon it,
With fruit within the nuts and water in the fruit,
O you who can bring water from a far off place,
Come, rescue me, a thoughtful man!
O Djehuty, a well is sweet when a man is thirsty in the desert:
It is sealed to one who uncovers his mouth unwisely,
But it is open to the thoughtful man.
Let the thoughtful man come
That he may discover the well for the how-headed man.
And you shall be filled."

-Papyrus Sallier I (translation from Foster, Hymns, Prayers).[25]

NOTE: The word *stone* is used, for example, both for the seed of a Date Palm fruit and for the endocarp of fruits, which are classified as "drupes," such as the discarded inner part of an olive or date. Whereas the Doum and Coconut Palm, also drupes, have parts of the endocarp which are edible.[26]

No. 5

"Italian botanist Emilio Chiovenda (1871-1941) erroneously believed Sallier 1 papyrus was referring to the Coconut Palm. He relied on other misinterpretations from the historical record from Greek and Roman texts shown below, when promoting his theory of the original source of coconut palms and migration."[27]

No. 6

"During the expeditions of Alexander, Theophrastus (EIP 4.2.7), (circa 4c), talks about a tree named 'cuciofeer,' but mistakenly interprets it as a coconut (Hohlwein 1939:24-25). His description is definitely that of the Doum Palm (Hyphaene thebaica) and since he traveled to Egypt & India, is based on his personal observations."[28]

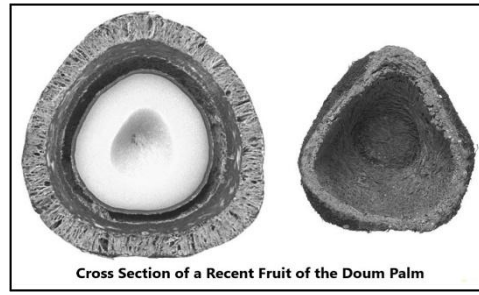


Fig. #6. **Doum Palm Seed. Courtesy Rene Cappers**.[29]

No. 7

"Theophrastus' assertion that the fruits of this palm grew separately, in contrast with those of the Date Palm, is not correct. It is beyond doubt that the depicted tree in Woenig (1971:289) is a Doum Palm and not a Coconut Palm, as he suggested."[30]

No. 8

"Pliny's Naturalis Historia*, a compilation of other sources, describes the Doum Palm based on Theophrastus using 'cuci' to name both Doum and Coconut Palm (NH 13.18.62). Therefore the Latin word cuci is related to the Greek word (Hohlwein 1939:27)."*[31]

The Doum Palm is native to Egypt, and also Pliny himself (NH 15.34.114) mentions this, using the word cuci again:[32]

"for instance the cuci which we spoke of as growing in Egypt."

No. 9

"A reference made by Schuiling and Harries (1992:23) to the Periplus Maris Erythraei, it is not tenable because it is based on a mistranslation by Schoff (1995:99) of the Greek word 'nauplios.'" [33]

No. 10

"It is tricky to link old Greek and Latin plant names with modern ones. For example, the word cuci can be related to one of the synonyms of the Doum Palm (Cucifera thebaica Delile). The identification of cuci with the Doum Palm is also confirmed by its connection with the old Egyptian word for its fruit, namely, 'kwkw' (Keimer 1984:65)."[34]

No. 11

"In the Periplus Maris Erythraei (Ch. 17), the word nauplios is used, which has been translated by Schoff as "palm oil" (1995:99). Schoff corrects the word to 'nargilios,' which in turn is related to the Sanskrit 'narikela' or 'narikera' and the Prakrit 'nargil.' According to Schoff, this palm oil came from the coconut. He supports this interpretation by relating the Greek cuciofeer and the Latin cuci to the coconut, which is not tenable. Casson (1989:61), on the other hand, translates the word nauplios as nautilus shell.'"[35]

At that time, the nautilus shell was an important trade commodity like cowry shells. Whereas, the time of and actual arrival and dissemination of *Cocos nucifera* along the East African coast, had not yet occured.[36]

No. 12

"The first indisputable description of the coconut is from Cosmas Indicopleustes. A similar conclusion is presented by Karttunen (1997:138), in discussing the Greek and early Roman accounts of Indian plants. The coconut is well described in the Topographiae Christianae (11.444.D), circa AD 530."[37]

No. 13

"Täckholm, who has visited the Red Sea coast several times, and particularly the district of Berenike, has not found any evidence for the existence of a Coconut Palm and assumes the Date Palm had been mistaken for the Coconut Palm (Täckholm and Drar 1950:318–319)."[38]

No. 14

*"The most western occurrence of the Coconut Palm, according to Schweinfurth (1894–99:52), was el-Hami (**14°51' N, 49°56' E**) along the Gulf of Aden, located near Shihr* [Al-Shihr today] *in present south Yemen (circa 1881)."*[39]

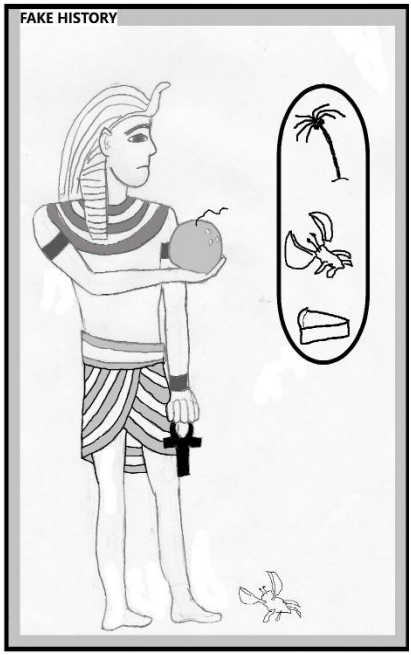
No. 15

"The temporary presence of palm trees along the Red Sea coast is not an uncommon phenomenon. This is especially true for exotic specimens, such as the coconut palms later planted near Suez, yet were recorded only at the beginning of the 20c (D'Abaza in 1907, see Täckholm and Drar 1950:318–319; Roelfsema 1916:3)."[40]

No.16

"Questionable reference of an 'Egyptian' coconut specimen of unknown age and origin, at the Florence, Italy museum. E. Bonnet suggests the possibility of a Greco-Roman date but may be merely a curiosity from India (see Germer 1985:236). He expresses doubt about its ancient status. Specimen is on a list of all objects transferred from Dr. A. Ricci collection to the archduke of Toscane. The reliability of Italian inventories from the 19c and that Ricci paid no special attention to the coconut, argues for a recent date."[41]

Let's move on…



"Pharaoh's fancied coconut cream pie but he had to crusade against the Coconut Crab just to get a taste. Was this Coconut Cartouche found anywhere in Egypt? Today, many recipe writers and food critics say yes to the presence of coconuts in the dynastic diets of Pharaoh's. Sorry, no drupes at all, making this a fallacy."

Courtesy: Miles Ballew

Courtesy: Mark Oliver. https://allthatsinteresting.com/coconut-crab

Hyped History

Marco Polo (AD 1254-1324) was a Venetian explorer who's travels from Venice to China and back (AD 1271-1295), would make him '*Traveler par excellence*' and would have many books and myths written about him and his chronicles. Not to doubt all that Polo was to have accomplished during his travels, it can be said, the encyclopedia has more pages assigning errors, controversies and disagreements of the stories told by him, then about his trek. Yet being such a popular historical figure, many have hung their message upon the questionable stories within the tomes of his exploration. This section features one such example of a famous 'Marco Myth,' frequently recited by so many.

No. 17

> *"Marco Polo referred to the coconut as "Pharaoh's Nut" when he ran across it in his travels to India, Sumatra, and the Nicobar Islands."* ***42, 43, 44, 45, 46***

Marco Polo never visited Egypt. When visiting Sumatra in AD 1291/2, Marco Polo was introduced to what is now known as the coconut. Many sources reflect Polo calling it "Pharaoh's Nut." How did he come up with the name "*Pharaoh's Nut?*" Odd indeed.

Cleopatra was the last Pharaonic Leader, ending her reign in 30 BC. Coconuts were never grown in Egypt, and references to coconuts eaten by Romans or Pharoahs have their basis in misinterpretation as we have discussed. Some argue it was a proven produce shown in Egyptian artwork and sculpture. Not true. Furthermore, the temples, tombs, and gardens which had the imagery of those exotic plants, were still buried under the sands of time; when Marco Polo is reported to have made that quip. Neither he nor his entourage would have or could have known, whether or not, Pharaohs had ever eaten or even seen a coconut. Furthermore, those Egyptian facilities of the early New Kingdom of the 18th Dynasty, as discussed, were created by rulers Thutmose I, Hatshepsut, Thutmose II, and Thutmose III. Yet these temples, gardens, and tombs were not located or discovered for hundreds of years after Marco Polo died.

For example: The Mortuary Complex at Deir el-Bahari, Luxor, was discovered in 1961. The Valley of the Kings, Garden Tomb of Minakht, was discovered in Thebes in the 1920s. And the Festival Temple in Precinct of Amun-Re was found in Karnak in 1589. Therefore, the first discovery of any of the imagery within these locations was in 1589; almost three hundred years after Marco Polo uttered the mythical title of the coconut as "Pharaoh's Nut."

In his defense, his historical 'biography' was written over time in four different principal types of text; 1) Geographic text in old French, 2) reworked French MSS text, 3) by Friar Pipno's Latin interpretation, and lastly, 4) Ramusio's Italian version. And from these four main rewrites were fifteen various major edits.[47] To add to the obvious error in translating what Marco Polo did or did not say about the coconut, each further reference to the coconut in his tome written about his travels, his interpreters said he referred to it as either the '*Hindu nut*,' the '*nux indica*' the '*Indian nut*' or the '*hindī nut*.' The faux pas seemingly fastened to the fable, as the - *Pharaoh's nut*.

Marco Polo had yet to arrive in India or the Nicobar Isles and spent some time seeking better weather prior to his trip to these future locations. Ironically in Sumatra, the spoken word for coconut was '*Thenga*,' within the Hindu world it was '*narikel*' and in Malabar of the western Indian coast, it was '*Temga*.'[48] During our time of interest the coconut was called '*Kanbar*,' as reported by traveler Al-Birhuni in AD 1030, prior to Polo, as well as traveler Ibn Batutta in AD 1333, after Polo.[49]

Perhaps the story is spun from the *Pharaoh's Rat* – something real! Further demonstrating how corrupt this historical Polo notation has become, most sources simply regurgitate this reported utterance of '*Pharaoh Nut'* and include the following false disclaimer, proving their ignorance of history nor interest in telling the story correctly…

No. 16

> "*The reference to the Egyptian ruler indicated Polo was aware that during the 6th century Arab merchants brought coconuts back to Egypt probably from East Africa where the nuts were flourishing.*" [50, 51, 52, 53]

This assumption is also flawed for several reasons. It has long been historically noted the Arab invasion, known as the "Rashidun Conquest" (AD 639-646) of Egypt, was launched in December of AD 639.[54] None of these dates are of the 6th century, but of the 7th century. Though this may sound like quibbling, it is important as it is wholly unfounded and not of the known ethnoarchaeological or archaeobotanical record. Reading this add-on statement shows someone's attempt to give a justification to a political name for the coconut at some point in time; when history truly does not bear out he actually called them the *Pharaoh's Nut*.

Egyptian Red Sea trade existed long before the Graeco-Roman period or territorial control by Arab conquests. Evidence comes from the distant Old Kingdom of expeditions to Punt to gather incense and other exotic items. Egyptian association with the land of Punt begins with a mention of a Puntite slave of one of the sons of Khufu of the Fourth Dynasty.[55] And we've covered trade relations with Punt and there is plenty of evidence of direct trade with India during the Roman Empire and earlier.

So there was no need to wait for Arab Traders in the 6th *or* 7th centuries to make coconuts available to Egyptian, Greek or Roman empires. The issue with the coconut was its commercial viability based on it perishability, not who were the merchants.

> *"Egypt fringes the northern distribution line of the coconut. According to Täckholm and Drar (1950:319), all attempts of cultivating the coconut in Egypt were futile because of unsuitable climatic conditions."*[56]

Located at the desert edge along the southeastern fringe of the Roman Empire, the Red Sea entrepot of Berenike existed for the primary purpose of facilitating long-distance transport, not only in

connection with international trade of ivories, metals, elephants and slaves, but also with food supply because the arid environment was unsuitable for subsistence farming.[57]

The term 'probably' used in that follow-on statement (**No. 16**) indicates the statement is not based on fact rooted in history, but an assumption coconuts couldn't be too far away, right? But east Africa where coconuts 'flourished,' was farther than you think!

The area meant here is Azania (Africa), which covers the east coast of present-day Somalia, Kenya, and Tanzania (Pemba Island) south to Rhapta (most southern Roman outpost), and to Dar es Salaam.[58]

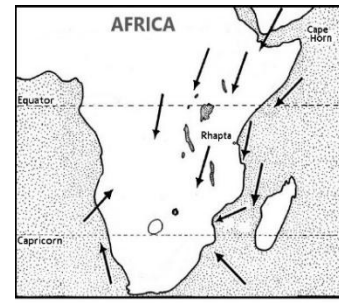
It is believed Pemba Island was most likely the first place coconuts arrived in Azania. "*A fragment of coconut endocarp from Tumbe was dated directly using AMS radiocarbon technology (Beta Labs-202852) to 1180 +/- 40 BP (cal.* AD 770-970 *to two sigma range). This appears to be the earliest directly dated coconut specimen on the coast of eastern Africa and confirms the presence of coconut from the earliest archaeological evidence of human habitation on Pemba Island*."[59]

This also clearly indicates it was not likely *"Arab merchants brought back coconuts in the 6th or 7th century to Egypt probably from East Africa where the nuts were supposedly flourishing."*

Cocos nucifera taxa domesticated originally in Asia, are hypothesized to have arrived in eastern Africa as early as the 8th or 9th century, including: banana (*Musa paradisiaca*), taro (*Colocasia esculenta*), coconut (*Cocos nucifera*), rice, sugar cane (*Saccharum officinarum*), and the date palm (*Phoenix dactylifera*) (Stahl 1984; Watson 1983).[60]

Finally on Marco's myth, we note ships heading for coastal African ports south of the Horn of Africa, had to deal with the monsoon winds, which determined both the departure and arrival times. As ships leaving for Rhapta [south-eastern African coast] could not depart

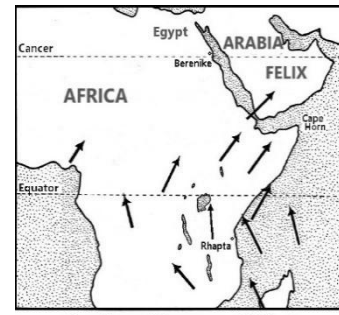
from Cape Guardafui [Horn of Africa outside the Red Sea] earlier than mid-October-November, due to prevailing monsoon winds. Wanting a quick trip to stock up on 'flourishing' coconut fruit from eastern Africa? Think again. Leaving the Roman outpost of Rhapta or Pemba Island on coastal Africa, the trip north with your boat full of coconuts would only take about 15 - 30 days to reach Cape Guardafui.[61]



Northeastern Monsoonal Winds
Bringing hot, moist air from Arabia Felis
November thru March

Fig. #7. Courtesy Sholte/De Geest [62]

Though a very treacherous sea route through the cape, you would need to wait (most often as much as 8 months) for a change in the strong northerly winds blowing down through the Red Sea, and then only travel at night due to heat, treacherous reefs and blustery winds. Getting from the ports around the Cape to Berenike would take a strenuous 75-110 days.[64]



Southern Monsoonal Winds
Bringing cool, moist Indian Ocean winds
May thru July

Fig. #8. Courtesy Sholte/De Geest [63]

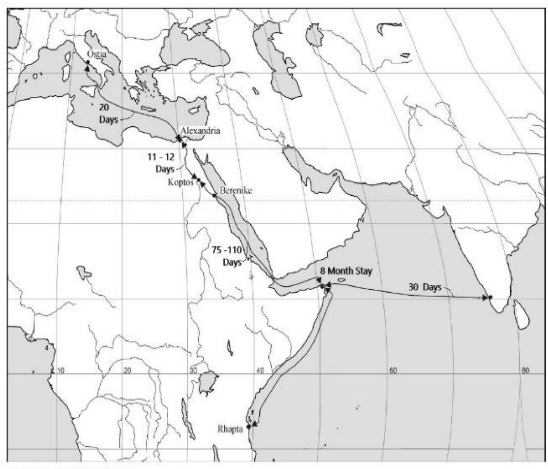


Figure 5.1. Duration of voyages.

Fig. #9. Courtesy J.J. Cappers [65]

Just your transit time with your perishable products needing to be protected from sun and heat, would take a minimum of 90 days; and yet with waiting for sailable winds, it could easily be 140 days before you could crack your nuts in Berenike.

As shown in the previous map, there was little difference in transit time for traders from India (Muziris) or from Rhapta or Pemba Island. However, based on arrival time to ports in and around Cape Guardafui, would have had a critical impact on when and how long a delay sailors would need to sit idle, waiting for beneficial winds to travel up the Red Sea to Berenike.

> *"Life of products that reached Berenike, either commodities, provisions for ships, or food products meant for local inhabitants, must have been given special attention as most were imported over long distances and were exposed to extreme temperatures. Markets that could offer perishables such as fruits and vegetables were not present, but some of these products could be grown in 'kitchen gardens.'"*[66]

There has been no documentation of kitchen gardens which may have included Coconut Palms, north of **14° 51' N, 49° 56' E** (Yemen coastal niche). Whereas, the Date and Doum Palm were found to be part of these kitchen garden biomes, when possible.[67] *"Yet, conclusive evidence of Indian imports is represented within this category by the coconut (Cocos nucifera) and the emblic* [a.k.a. amla or amala] *(Phyllanthus emblica) which had their origins in India."*[68]

Further archaeobotanical evidence is found in the soils of the distribution center on the outskirts of Roman territory, at Berenike. *"The unbalanced representation of different kinds of fruit fragments in the subfossil record suggests that most coconut fruits were traded as dehusked, whole fruits* [no husk, just nut]. *Unopened coconut* [nut] *can be kept for consumption until all the liquid endosperm inside has disappeared. As soon as the coconut is opened, the production of free fatty acids starts and consumption cannot be delayed too long before becoming rancid… It is very likely that the coconuts found at Berenike would have been imported from ports along the Malabar coast* [Kerala India]." [69]

To keep all of this in context, the number of coconut fruit pieces excavated at the primary Roman trading ports of Berenike, Shenshef and at Quseir al-Qadim during the period of AD 100-600, totaled EIGHT pieces! FIVE more fragments were found at Quseir al-Qadim

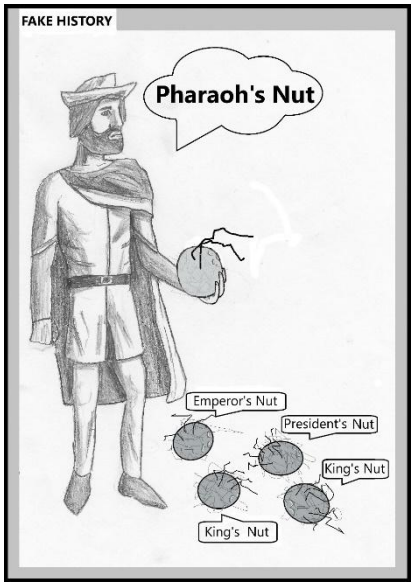
dated to the AD 1200-1400 period.[70] It is more likely these remnants represent the perishable coconut fruit consumed by the arriving ocean traders and was trash littering their vessels. The conversation becomes moot as the perishable period of coconut water, coconut milk or most byproducts (except oil or dried meat), had long expired in transit. Furthermore, *Cocos nucifera* commodities were not mentioned in the *Alexandrian Tariff* on botanical trade items, nor identified as a commodity in the *Periplus Maris Erythraei* chronicles or from the written *ostraca documents.*[71]

It is provable coconuts were most likely not available from the ports along Africa's eastern coast during the timeframe boasted in the statement **(No. 16)**, nor would they be a consumable commodity once they reached the outer hinterlands of the Roman or Egyptian empires. Other than misidentified in images and history, unless you were an Egyptian or Roman handling the incoming commerce brought by traders at Berenike - or offered the last nut off their vessel, no Egyptian or Roman ate or drank from a coconut, - *as so frequently hyped*.

The image on the left is shown with the explanation "*Carried much earlier by Arab traders into Mesopotamia, a coconut palm was depicted here in bas-relief and shown at the Archaeological Museum of Aleppo*."[72]

This is obviously not a Coconut Palm (*Cocos nucifera*) but the Date Palm (*Phoenix dactylifera*) as can be seen with knowing coconuts do not grow on a stem or in bunches with other nuts like bananas. Nor does the trunk widen at the bottom as depicted here. Both are characteristics found with the Date Palm and can be Googled for clear comparison. But why ruin a good story.

———————



"Marco Polo was seen searching a pile of Sumatran seeds known locally as 'Thenga.' But Polo saw a resemblance to the Great Pharaoh Duped-ya, and thus renamed it "The Pharaoh's Nut." The entourage of dumb, eager journalists, and writers and food critics, quickly captured the quote to forever prove even the Egyptian Duped-ya did drupes! Another dumb drupe dilemma de-mystified!"

Courtesy: Miles Ballew

No, not the *Cocos nucifera*. The Coconut palm does not grow multiple trunks from a single plant, as shown. The coconut is drawn tight under the branch, but this shape is indicative of date bunches hanging below.

But what about those who bend the truth to suit some bias or promote a professional aspiration. I present just a few notes next.

Fallacious Fiber Fables

In my research on all things cuckoo for coconuts, I came across several articles which I personally felt were egregious in their disquisition of this drupe. This first example demonstrated a clear bias for anything regarding "Oak Island," and seemed to go out of its way to disprove and disguise any significance of the 'coconut' fiber found there.

"*Oak Island Archaeology Update: Just how Surprising is the Coconut Fiber?"* Published in Archeothought.com [73]

> *"…So just how rare is coconut in archaeological sites of comparable age in northeastern North America? It turns out that it isn't very surprising at all. From a bit of very quick looking around in the archaeological literature, it is clear that coconuts were circulating quite widely in all of Northeastern North America by the middle of the 19th century* **[1870'S]***, and that they were available and used inland as early as the 17th century* **[1600s]***. Coconut shell shows up in an early 19th century* **[1800s]** *archaeological site in Nova Scotia itself, at Salter's Gate near the Alexander Keith brewery* **(MacIntyre and Davis 2006:24)**. *By the mid-19th century* **[1850s]***, coconut was widely available in North America as far away as Toronto, and apparently not considered a luxury good. "Coconuts were well-known in Toronto from the mid-nineteenth century* **[1850s]** *onward, and merchants advertised in the newspapers for both whole coconuts and processed forms as specialty items"* **(Driver 2018:59)**. *Archaeologists have reported coconut fiber dating from the 17th and 18th century* **[1600s & 1700s]***, and coconut husk dating from the 18th century* **[1700's]** *in a site in Albany, New York* **(Huey 2018:44)**. *Albany is not exactly ocean front property. It is a good 150 km up the Hudson river from the ocean. It also isn't any more tropical than Oak Island.*
>
> *Fairly conclusive demonstration that coconuts were not unusual or luxurious on the eastern seaboard comes from the fact that in the 19th century* **[1800s]***, a flour mill at Old Place Neck on Staten Island in New York was "modified to process coconut shells and iron ore" for use in paint pigment* **(Palinc, n.d.:11)**. *In an archaeological report on a complex in Upper West Side Manhattan that mostly covers the period from the 1870s to early 20th century* **[1950s]***, and co-authored by Eva Hulse, with whom I worked for several years, a whole section is dedicated to the*

analysis of the coconut finds. Even though, according to the report, the coconuts "would have needed to be transported very long distances to be consumed," "the coconut was not a stranger to the citizens of Manhattan" **(Turck et al 2016:94)**. *The report goes on to note that there were 174 shipments of coconut into New York Harbour in 1872 alone, and about 8 million coconuts in total. "The sheer number cited above suggests that coconuts were not exactly rare commodities" (:94).*

Coconut fiber has a number of commercial applications, that range from ship building and repair, which likely happened on the **[Oak]** *island, for insulation, and rope production. Rope production from coconut fiber was important in the 19th century* **[1800s]***, and some of it was even made in the UK. Is it possible, then, that the coconut fiber found on Oak Island is from rope used in farming, light industry, and searcher activity from the 18th to the 20th century* **[1700 to 1900s]***? Why yes, it certainly is possible."*

Unknown Author – his article references are below.

Authors Note: In the above article, I have added the bracketed **[ ]** information so we are clearly understanding the timeframes the author alludes. The purpose in doing so is to prove his sources say no such thing and give no such dates!

Here is what his "sources" actually said, contradicting the *Unknown Author* and shedding light on their bias and agenda toward the Oak Island enigma…

4. **(MacIntyre AD, SA Davis 2006**) Salter's Gate: Archaeological resource Impact Assmt. Final Report, http://library2.smu.ca/handle/01/26882#.XmZTJqhKiUl

"Features #6 & #23 are annotated as having found a piece of coconut shell. This feature #6 was undisturbed prior to excavation and artifacts were recovered from their original context. The west half of the feature was excavated in ten-centimeter arbitrary levels in order to interpret the depositional history of the privy, and all artifacts encountered were collected and recorded with the exception of some unstable artifacts which were not substantial enough to warrant conservation (primarily copper shoe tacks leather shoe fragments, wood fragments, and ***a coconut shell****). For each ten-centimeter level recorded, a mean ceramic date was established using the most diagnostic ware types for which production dates are known (i.e., creamware, pearlware, ironstone, yellow ware, Maritime redware, etc.) (Table 5.0-1). A total of 4,027*

ceramic sherds, glass, wood, bone, metal, clay pipe, leather, and other fragments including a complete felt halt (BdCv-49:3471) were collected and catalogued from feature 6. ***A mean ceramic date of 1812 was determined for the feature****. (page 24)… Feature 23 was a circular dry stone-lined well adjacent to feature 18 on the east side… The interior soil matrix was comprised of a rich black, saturated, organic soil. Artifacts recovered from this feature included a brass shoe buckle, brass clasp, clay pipes, a* ***coconut shell****, ceramics (creamware, stonewares, ironstone, pearlware, porcelain, tin-glazed earthenware, and white refined earthenware). Organic materials such as leather and wood were well preserved.* ***A mean ceramic date of 1803 was calculated for this feature*** *(Table 5.0-4). (page 34)*

Table 5.0-4: FEATURE 23 ARTIFACTS & MEAN CERAMIC DATE

Artifact	*Qty*	***Mean Ceramic Date***
Brass shoe buckle	*1*	
Brass clasp	*1*	
Brass button	*1*	
Ceramic, Coarse Earthenware	*15*	
Ceramic, Coarse Stoneware	*3*	
Ceramic, Creamware	*112*	
Ceramic, Fine Stoneware	*2*	
Ceramic, Ironstone	*12*	
Ceramic, Pearlware	*65*	
Ceramic, Porcelain	*7*	
Ceramic, Refined Earthenware	*24*	
Ceramic, Tin-glazed Earthenware	*3*	
Ceramic, White Refined Earthenware	*5*	
Clay Pipe	*17*	
Coconut Shell	***1***	
Glass	*30*	
Leather Shoe	*1*	
Total Count	*300*	***1803"***

The archaeological evidence referred to in this first reference found a single piece of coconut shell within this excavation and is labeled with an **1803** era date. Coconuts and their byproducts were considered exotic items. Though most of these were likely obtained elsewhere, this sole nut shell fragment may have been refuse from consumption.

2. **(Driver E, 2018)** Coconuts in the latrines! In H. Martelle, M McClelland, T Taylor, & J Lorinc (eds).

"Document Printed. Whole coconuts were for sale in Toronto in ***1857."***

No dates in these two referenced sources would counter the uniqueness of 1.54 metric tons of CCF found within Oak Island, nor indicate coconut commerce had been widespread or common throughout the northeastern US or Canada at that time.

3. **(Huey PR 2018)** Annotated Bibliography of New Netherland Archaeology, New Netherland Institute.
https://www.newnetherlandinstitute.org/files/9615/2357/6324/New_Netherland_Archeology_Annotated_Bibliography_-_March_2018.pdf

"2004 ***A New Look at an Old Object****. New York State Preservationist 8(2):22. New technology and sources of information enable the identification of previously unidentified artifacts. A coin has been identified that was excavated in 1972 from an 18th century soil layer deep under State Street in Albany. It is among other 17th & 18th century artifacts recovered during excavations for a trench to install new electrical conduits under Albany streets. The coin is from Brazil and is dated 1736. It is a 10-réis coin with a prominent X on one side, and it has two holes in one edge to enable a person to wear the coin on a string so that it always faced forward. It was found in the street directly opposite the lot on which stood the home of Albany merchant Simon Veeder (1709-1786) and later of his son Volkert. The Roman numeral X on one side could have had a different meaning to the wearer since American Indians and enslaved Africans often believed the symbol "X" had supernatural power. Volkert Veeder, in fact, owned one slave in 1800.*

How the author validates his claim that "*Archaeologists have reported coconut fiber dating from the 17th & 18th century* [1600s & 1700s]*, and coconut husk dating from the 18th century* [1700's] *in a site in Albany, New York (Huey 2018:44)"* with the reports based on this source, is missing any cognitive recognition, unless there is an image of coconuts on the reverse side of that Roman coin. He does better at determining the climatic connections to Oak Island, but he shouldn't quit his day job.

4. **(Palinc, n.d.:11)** Public Archaeology Laboratory n.d. New Discovers at Old Place: The story of the Old Place Neck site, Staten Island, New York.
https://www.palinc.com/sites/default/files/publications/Old_Place_Neck_Site.pdf

10 OLD PLACE NECK SITE, STATEN ISLAND, NEW YORK 11 CHAPTER 2

"Staten Island and Old Place began to change dramatically in the years before the Revolutionary War. Farming on Staten Island expanded to take advantage of trade with Caribbean sugar plantations. The sugar plantations had to import much of their food because the farm land on the islands was devoted to sugar cane. The people working in the fields on both the farms in New York and the sugar plantations in the Caribbean were enslaved Africans. By the early 1800's mills were being built in northwest Staten Island. The ***first mill in Old Place was built in 1803****, just south of the site. The flour mill operated through the* ***1860's and was later***

***modified to process coconut shells* and iron ore.** *The brick, plaster, nails and other building debris found by archaeologists may have been part of the later mill works, but no surviving maps or documents help identify the building. It was likely demolished when Goethals Bridge Road was built in the 1920's, removing the last surviving historic building from the site."*
https://dokumen.tips/download/link/new-discoveries-at-old-place-2018-04-26-clues-data-that-help-archaeologists.html

I continue to be mystified how this referenced source justifies the authors comment as coconuts being "…*Fairly conclusive demonstration that coconuts were not unusual or luxurious on the eastern seaboard…"* Nor that the post-1860's operation of a retrofitted mill to process coconut shells and iron ore, has anything to do with coconut coir fiber found on an island in Nova Scotia, as much as one hundred years earlier.

5. **(Turck et al 2016:94)** [Turck JA, E Hulse, K Wiley, R Yamin, J Mazzariello, A Berry, ZS Garrett 2016]. Phase I & II geoarchaeological investigation of Riverside Project Area, Vol. I: Background, research design, results, & conclusions, Geo-archaeology Res. Ass. **http://smedia.nyc.gov/agencies/lpc/arch_reports/1682.pdf**

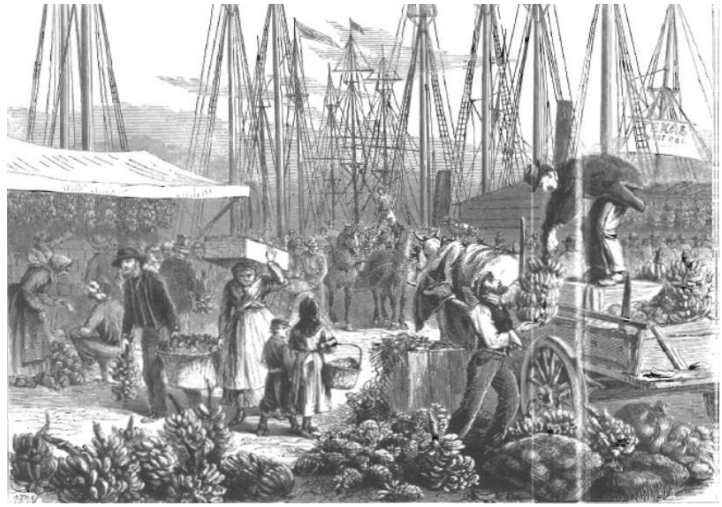
*"Depositional Unit 3a, 3b, & 3c. …dating these strata to as early as the early 1800s (page 87)… Ethnobotanical remains include 32 peach pits, six melons seeds, **one coconut shell**, five squash seeds, and one UID floral remain." (page 88). Ethnobotanical remains include 110 peach pits, 88 melons seeds, 68 squash seeds, **and 25 coconut shells**, as well as smaller amounts of pear, pumpkin, plum, peanut, walnut, rubus family, acorn, and tree nut (Figure 4.56 and Figure 4.57).*

Seasonality: The Arecaceae Family. All but one of the 26 coconut (Cocos nucifera) shell fragments were found within Depositional Unit 3d. Biologically, the shell is classified as the endocarp of the coconut palm fruit. Some of the coconut husks (mesocarp) were also preserved. Several of the fragments appear to be cut, but it is unclear if this fact actually indicates any industrial use. ***Commonly spelled as "cocoa-nuts" in the primary sources, these are the most exotic ethnobotanical finds in the assemblage. Coconuts are not native to any area near New York and would have needed to be transported very long distances to be consumed.*** *This does not mean that the coconut was a stranger to the citizens of Manhattan. An* ***1870*** *plate from Harpers Ferry shows exotic fruits and vegetables from the Caribbean and South America being unloaded at New York City docks (in Grafton 1977:230) (Figure 4.59).* ***Sources contemporaneous to our finds are somewhat lacking regarding this drupe, forcing a look at slightly later times. Two sources from the early twentieth century state that coconut palms were still not being cultivated on a commercial scale within the United States by the 1920s***

(Cook 1910:335; Walker 1920:11). *Instead, coconuts were imported from Central America and the Caribbean with* ***New York acting as a distribution hub for the rest of the United States*** ***(Walker 1920:9, 11****). Sources contemporaneous to the Riverside site agree with these geographic origins. A search of the online archive of The New York Times cites ships docking in New York with coconuts from St. Andrews (assumedly Barbados), San Blas (assumedly Panama), Cartagena (assumedly Colombia), and Kingston, Jamaica ("Marine Intelligence"* ***January 29, 1874****; "Marine Intelligence"* ***February 14, 1874****; "Marine Intelligence"* ***June 9, 1874****; "Marine Intelligence"* ***October 18, 1874****). The dates of these articles found in the Times also show that coconuts were available for most, if not all,* ***of that year in New York****. The merchants sited in the Times were cross referenced to the* ***1874*** *and* ***1875*** *Trow's Directories,* ***but none were explicitly linked to our site, suggesting that the Riverside finds were probably not commercial waste****. Another report in the Times* ***further cites 174 shipments of coconut into New York harbor in 1872****: 143 from Baracoa (Cuba) and the rest from San Blas, "San Andreas" (likely St. Andrew, Bermuda), "San Antonia" (likely a misprint of "San Antonio", which could refer to various places throughout the Caribbean and Central America), San Domingo (modern Dominican Republic), Cartagena, Ruatan (Honduras), Old Providence (Providence Island), and Kingston;* ***almost 8 million coconuts were imported over these shipments*** *("Foreign fruit"* ***May 14, 1873****). Interestingly,* ***the Tribune does not have any record of coconuts on the market****. The sheer number cited above suggests that coconuts were not exactly rare commodities. In fact, as reported in the Times, the market value of coconuts sold at the Washington Market in September 1874 does not indicate that they were prohibitively expensive compared to other fruits ("Family Market"* ***September 12, 1874****). Smith (2009:60) concurs that certain Caribbean fruits were being imported into the city by the late eighteenth century at fairly low cost,* ***but not coconuts****. So it does seem possible that middle class families would have purchased them once shipped.* ***In terms of use, according to O.F. Cook, the meat of the coconut was mostly used for pastries and confectionaries in the United States*** *(1910:290). Coconut oil could have been used for cooking (Cook 1910:290) and making soap (Walker 1920:19). Cook (1910:290) also mentions the use of coconut "milk" as a beverage, although by native peoples in the Caribbean and Pacific. With this thought in mind, though, the occurrence of coconut in our assemblage could very well reflect a lack of safe drinking water in the chronically underdeveloped neighborhood of the site. Smith (2009:40) does note that there was a relative lack of clean drinking water in the city at this time. Alcohol containers are quite evident in the assemblage, possibly reflecting such a lack of drinking water. In addition, Meredith Linn (2008:508) suggests a possible medicinal use for coconuts.*

Irish immigrants may have tried to utilize the exotic nature of coconuts in an attempt to treat tuberculosis. Linn (2008: 726) also cites coconut oil as being used in hair tonic for baldness. (pages 92-94)."

Depositional Unit 3. The artifacts within this fill layer date from the mid- to late-nineteenth century. Artifact type and maker's mark analysis, in conjunction with newspaper sources, indicate that the deposit was laid down by 1874. However, by February of 1875, the trash was sealed beneath the cobblestone pavement, ***making it likely that the majority of the landfilling effort took place during the Fall and Winter of 1874-1875****. (page 102)."*



Courtesy: Figure 4.59. Exotic produce from Caribbean and South America unloaded in New York (*Harper's Weekly* 1870, from Grafton 1977; 229).

This is it! The sources which the author cite clearly and conclusively show that coconuts became a commodity introduced into the exotic fruits and vegetable distribution hub of New York City shipping ports, starting as early as the mid-1870s. None of these sources justify the bias and hyperbole exhibited in the article written to diminish these ancient drupes or answer in any way, the conundrum of coconut fiber on Oak Island.

Shipbuilding in the Atlantic Ocean Basin did not use coir for rigging or caulking in the 17th, 18th, 19th or 20th centuries. The British Admiralty never found coir fiber-based marine cables and rigging as worthy or appliable to their fleet.[74, 75] Coir twine was manufactured circa late

1840s in London, as there was an attempt to incorporate it into the burgeoning textile boom. Coconuts imported into the United States (New York) were in fact, produce imported for the removal and desiccation of the white flesh (meat or copra) from the nut to produce coconut flakes used in confections. The remaining shell was sold or used to produce ladles. The coconut husks were burned or thrown away, as no automated retting process of husks had been developed, so no coir fibers could have been manufactured. The fact the true archaeologists didn't know the archaeobotanical implications of the coconut is itself confounding.

"Doing her part, Betsy Ross stitches American Revolutionary Flags together with the fine fiber of the frequently found coconut, populating much of the colonies along the Northeastern coast of the American continent. Farming with fibers is a common pastime and Betsy simply knots the nut fibers within the weave, so farmers feel delighted with the wondrous plant offerings." Fiber Farming fallacy?

In finishing this chapter, I return to a conversation discussed in both previous volumes. The document discussed here represents the purposeful bending and contortion of history to create a narrative to address perceived slights in equity and gender bias. Yes, the coconut can do that to some people. I've had several conversations with the author of this next article and it was clear she thought I was hung up on 'old history.' Perhaps. So I will present my analysis of *"Gripping it By the Husk: The Medieval English Coconut,*" and let you decide.

Due to the plethora of examples of 'new history' presented by this author, I will select some of the more egregious coconut corruptions and invite you to read the full article and you can smoke out the rest. However, let us agree to known facts before we review this article - *Typically*, scholars chart the beginning of the medieval period (meaning 'middle ages') from the crumbling of the

western half of the ancient Roman Empire, circa AD 480. The medieval era spans the middle portion of the two millennia intervening one thousand years and spanning approximately the years AD 500 - 1500.[76]

Fig. 5.55. The thirteenth-century town seal of Winchelsea (National Maritime Museum, Greenwich).

The first period of this era was called the '*Early Middle Ages*' and lasted from approximately AD 500 - 1000. The rise and dominance of the Catholic Church was a hallmark of the medieval epoch and shaped the next period of this era – the '*High Middle Ages*,' from AD 1000 - 1250. This period is marked by the Crusades. The *'Late Middle Ages*' was pot-marked by dynastic wars, climatic calamity and the plague which repeatedly swept the continent, with Black Death taking between 75-200 million people across both Europe and Asia between AD 1347 - 1351."[77]

The closing of the medieval period was marked by discovery of technological, artistic, territorial and cultural expansions. It is frequently determined that the medieval period ends with the discovery of the Americas by Christopher Columbus in AD 1492 and the Reformation. The '*Modern Age*' would then come to replace those *Middle Ages* of the medieval period. So we are talking about AD 480 thru AD 1492.[78]

So now let's read about the commonality of medieval coconuts…

"Gripping it By the Husk: The Medieval English Coconut"[79]

> **Pg 2**. *"My study reveals, instead, that late medieval England was actually rife with coconuts – and that this apparently surprising fact reveals much about the need to challenge the old assumptions that have governed medieval studies. Coconuts imported from India healed people and cups made out of coconuts graced the tables of medieval English households for hundreds of years before Columbus sailed to the Americas. Placing the coconut in its English context enables a case study of the degree to which medieval people had physical, daily experience of durable goods from far outside Europe.... First, the evidence of coconut ownership provides a surprising proof of the imported luxury markets reach in medieval England. While coconuts were certainly beyond the means of peasants, the evidence is clear that, by the 15th century* **[**1400s**]**, *coconuts could be found in even quite modest homes. Second, we must credit that the medieval English owners of these items may have viewed their provenance in Asia, and India in particular, as ordinary and comprehensible as well as* ***rare*** *and magical."*

['Rife.' "Definition: Prevalent especially to an increasing degree, abundant, common. Copiously supplied: abounding."**]**[80]

What an overstatement! The author is trying to convince you that most medieval households had a coconut maser, treen or tureen and were familiar with the coconut and its many uses. This is as far from the truth that I have ever heard - *in my humble opinion*. Though flourishes are part of writing - the facts must bear out a basis for that commentary.

My "old history" research shows otherwise...

> "*At the start of the 15th century, England was an economic laggard in development compared to other countries in Europe. Having lost 50% of its population to the plague of 1348-49, and another 10% with its reemergence in 1361-62, prices for foodstuffs soared and remained high into the 1400s*."[81] "Extremes in weather, livestock epidemics as well as the Peasants Revolt of 1381, kept chaos raging."[82]

> "*At the start of the 1400s, concurrent with the accession of Henry IV (r. 1399–1413), Great Britain and Ireland were rife with internal tensions, including Welsh revolt, a series of baronial rebellions, and ongoing warfare among the Anglo-Irish nobility. In 1415, Henry V (r. 1413–22) renewed the war with France that had continued, with interruptions, for nearly a century. During the reign of his son Henry VI (1422–61; 1470–71), however, the English were expelled from France and political turmoil erupts at home when the king's frequent illnesses placed England in the hands of a Protector, Richard, duke of York. By the end of the 15th century, civil war between the Yorkists and Lancastrians had seriously undermined the power of the monarchy and left the nobility fractured and vulnerable*."[83]

This quick historical trip down memory lane was to refresh your view of how widespread '*modest homes*' were during the time period, and how the typical upscale Englander reportedly had "*physical and daily experience of the coconut – a durable good from outside Europe, by the 1400s*," – hardly.

Continuing…

> **Pg 5.** *"… As we shall see, coconuts has been harvested and shipped as export commodities across the Indian Ocean and into the eastern Mediterranean since Roman Times. In this sense there was no "medieval coconut" at all; coconuts had been a normal export or import for a very long time. In fact, given England's Romanization, it seems likely that coconuts were imported in this early period, too, if less commonly after 410 CE, when trade within the Mediterranean are became increasingly difficult. At some point in the later Middle Ages, and by the mid-thirteenth century at the latest, coconut began to become regularly available in England; the "medieval English Coconuts" of my title." Most recently, Karl-Heinz Speiß has studied coconuts among other precious objects prized in European court culture but begins his study with Vasco de Gama's voyage to India in 1498 (15). Prior to that encounter, he claims that "nothing can be said with certainty about the coconut trade, since coconuts are not listed in tariff-lists or freight registers" (16). Happily, English sources provide more insight than this. Speiß also associates coconut collections exclusively with the nobility and the papacy, notwithstanding the collections at Oxford and Cambridge (17)."*

We have already exhausted here and in previous volumes, the archaeobotanical and ethnobotanical evidence proving coconuts were not a commodity exported into Roman Egypt, nor shipped into the Mediterranean for further markets. The leap to make coconuts a part of the Roman Empire in England, even prior to AD 410, is akin to arguing there are Taco Stands in Siberia because there are three Mexican researchers studying mammoth bones! Though I point out, coconut shells were often crafted into cups, treens, mazers and other containers and were known to be brought into the western world as exotic souvenirs, collectible ornaments, and religious iconographic products. This trafficking of rancid coconut shells for guild crafting or carried along the Silk Trade routes as a sellable ware in Europe, does not portend *any* market of coconuts within *any* of medieval Europe. The author attempts to hide her bizarre premise with determinations by other historians investigating future historical anecdotes outside of her *Medieval Period*, specifically Vasco de Gama. And still her argument references the historians' future findings, that "*nothing can be said with certainty about the coconut trade, since coconuts are not listed in tariff-lists or freight registers.*" And this is exactly what the archaeobotanists discovered when looking at Greek and Roman import tax and tariff documents through Red Sea ports, discussed here earlier.[84]

> **Pg 7.** *The Coconut Cups of Late medieval England*. *"The earliest record of a coconut cup I have found in published sources dates from the mid-13th century; and while it seems likely that they arrived in England earlier than this, they certainly become increasingly common in wills during the 14th and 15th century – partly because making a will became a more common practice in this period (28). I have found coconuts willed in every quarter century, and almost every decade, from 1300 onward through the end of Henry VIII's reign in 1547, and beyond (29). In one series of wills from 1479-1486, twenty-one people bequeathed one or more coconuts (30). Probability suggests that the complete manuscript record would confirm the regular appearance of coconut cups in wealthier medieval homes across England. Thanks, perhaps, to the coconuts introduction to the Americas, it could no longer be thus identified, and the 'coco' modifier was added later in the 16th century. The only nut large enough to serve as the bowl of a goblet was a coconut. There was no others. In wills, a "mazer" refers to a decorated Maplewood cup."*

Obviously, the author is tenacious. To go through all those documents, wills and court records to notate, perhaps 200 hundred coconut cups from 1300 through 1547, is a dedicated act. However, here we will "Box in" and **Grip The Facts** as found over the historical record.

> **P 13.** *The Migratory medieval Coconut. "Venetian fleets regularly made the sea voyage to Bruges or Antwerp starting early in the 14th century, and England became a stop along that route (58). Trade agreements to make port in England were reached with Edward II in the early 1320s,* and it does not appear to be happenstance that the records of coconuts in England become a regular from that era onward (59)."

So here our author admits that it wasn't until the 1320s, almost 840 years after the start of the medieval period, that coconuts started to hitch rides to England and may be an exotic imported commodity for the privy to enjoy. Or am I jumping to conclusions? Old History says…

> *"From* AD 1250 thru AD 1800, *the coconut shell was known in the form of gold or silver plaited mounted cups, drinking flasks, and other objects which were called 'treen' by antiquarians between those dates. Records show that these items were found in cathedrals and in castles from the Tyrol to Scotland." See (Fritz, R. 1983), Die Gefaße aus Kokosnuss in Mitteleuropa 1250-1800. Philipp von Zabern, Mainz am Rehein. Pinto, 1969). Eleven coconut cups survive from medieval England. See the Eton College example in R. Marks and P. Williamson (eds.), Gothic Art for England 1400-1547, item 190. [As that entry makes clear, such items were very rare]."*[85]

GRIPPING THE FACTS

AD 220 - Philostratus' "*Life of Apollonius of Tyan*." English "translation" by F.C. Conybeare, 1912 Book III, Chapter V, p.241… *"It has been presumed that the nuts referred to are coconuts because it is difficult to think of any other kind of 'nut' that would be a marvel in the Mediterranean. In the context, Philostratus is referring to the Ganges plain and he specifically mentions the impressive height of the corn, beans three times larger than Egyptian beans and sesame and millet 'of enormous size'."*[86]

The Coco-de-Mer is the largest nut, weighing between 79-99 Lbs. & many times larger than largest coconut.[87]

AD 1259 - Coconuts, while commonplace objects in their native lands, were highly prized & rare objects in Europe. When they first arrived in Europe is not certain… however in 1259 a Bishop of Durham noted, *'"A cup of walnut/coconut with a foot and silver fittings."* **Imagine that!** Throughout the following centuries there are further mentions and by the 1700s they regularly appear in the silver inventories of the nobility. As they continued in popularity through-out the centuries, the form gradually became plainer to the extent that the majority of the 19th century examples the ornament is kept to the mounts and the shells are simply polished. (Lehmann-Brockhaus, 1955).[88]

The author further opines…

Pg. 16. *"They were never shipped in large enough quantities to turn up in Italian or English tariff lists (68). The Venetians appear to have acquired their coconuts in Alexandria, but the fruits had arrived there from much farther away… By late antiquity, coconuts were a normal part of the trade passing from India to Egypt (70). They appear in the accounts of Indian merchants trading with the important port of Aden in the 12th century, and archaeological evidence evinces imported coconuts in the region from the 11th to the 15th century (71). In Egypt, coconuts were eaten for their medicinal properties, and the evidence suggests that their shells were discarded after the meat and milk were harvested (72). Local African and Egyptian coconut cultivation, where it existed before 1500, appears to have remained limited to narrow climate zones, so that coconuts continued to be imported from India throughout this period (73). By the 16th century, the Portuguese circumvented Venetian networks and were exploiting India directly; however, their success was far from total."*

The above (Page 16 excerpt), except for two sentences on where the coconut palm was believed to have come from [not shown], are in their original context and exactly as represented in this quoted article. Unfortunately, little of it is true, nor do her references to the text say what is purported to have been written. Perhaps the author got her references wrong, or mixed up, but having read those cited documents, I cannot fathom those archaeobotanists would have made such determinations. I even emailed one author to verify the reference with her name was even a legitimate source. It wasn't actually.

So here are the actual excerpts from the exact same references she sources for her article.

Her references (69), (70), (71), (72) & (73) (Van der Veen*, *Consumption, Trade and Innovation*; Cappers*, *Exotic Imports*; Van der Veen*, *The Plant Remains: Diet and Trade*) are more fully listed at the end of this chapter for your personal investigation. The following excerpts are from these same sources which she claims prove otherwise.

> Pages 48 & 49: "Coconut is moderately common in the archaeological deposits at Quseir al-Qadim, with 27 fragments in the Roman, 88 in the main Islamic and 14 in the Late Islamic deposits, though, surprisingly, most of the remains come from the hand-picked samples. The remains consist of fragments of the shell and a few sections of fibrous husk, with or without the exocarp: no remains of the white coconut meat were found. At Berenike, similarly, shell fragments and a few fibrous husks derived from both Early and Late Roman deposits, but no other reliable archeological finds of coconut have been recorded in North Africa, the Middle East or Europe. (Descriptions of what was thought to be coconut by several classical writers are now thought to refer to the dom or doum palm which is native to Egypt – see Cappers* 2006: 73-79)."
>
> Section 2.2.3 Coconuts: "It would appear that the Romans did not use coconut in their cooking (it is not mentioned in any surviving recipes), and the fragments of the fruits found at Myos Hormos may represent remnants of what was consumed on the journey back from India, rather than intentional imports. Equally likely, however, is that they were deliberately carried to make rope, cordage and caulking over their long journey. (Goitein & Friedman 2008: 317n28)."
>
> Page 228 Section 6.1, Commodities and Trade: "The Indian foodstuffs found at the Roman port, Myos Hormos, are black pepper, rice, coconut, mung bean and beleric myrobalan. Pepper is numerically by far the commonest import, followed by coconut and rice, though the quantities are low compared to the Islamic period. While pepper and rice were certainly commodities passing through the port for onward journey to Rome and beyond, coconut, mung bean and beleric myrobalan represent leftovers of foods eaten on the journey back from India or foods of the Indian sailors temporarily residing in the port; there is currently no evidence, archaeological or textual, for their

consumption in the West at this time. The coconuts may, in fact, have been brought back for their fiber (coir) – which was commonly utilized for caulking ships and making ropes – rather than as a food."[83]

Instead of listing many more examples, I think the point I've laboriously attempted to make in this chapter, is clear. The coconut was not at all common as many have purported, either because of this palms' climatic growing and germination requirements, the nuts perishability over time or the constraints of long distance shipping. Having a sailor or two or three, bring back a few old coconuts, most likely to sell to guilds to make treens and such, is a far cry from hauling a bunch of rancid-filled nuts for the masses. The article is only 21 pages in length and is one of several which has blazed this author to stardom in the rewrite of 'old history.' I didn't get to the gender equity part, I couldn't take any more. But you can find it and watch history rewrite itself. So don't be surprised if you read about the coconut somewhere or at some time where it was said to be grasped by the husk, when it was not. Unlike most, you are fully aware of what this drupe did and did not do.

Royal treat – AD 1672 – "The Dauphin of France wanted to eat a coconut, so his private tutor got one sent through overseas contacts, but it took so many months to come that it arrived in an awful condition; coconut was well-known at that time in Europe but quite impossible to find."

Muller, A. (1998)

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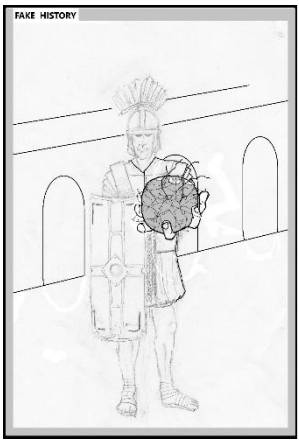
(15) "*Asian Objects and Western European Court Culture in the Middle Ages*." By Karl-Heinz Spieß. Published in *Artistic and Cultural Exchanges between Europe and Asia, 1400-1900*, 1st Ed. 2010. Titled "*Asian Objects*." 20 Pages.
(16) ibid, 22. Fritz, Die Gefaße, 11., also found coconuts in wills and inventories, as I have.
(17) Spieß, "*Asian Objects*," 23.
(28) "*Wills and Inventories, 9*." By Raine. "This mid-13th century date is also noted by Fritz, though I have found far more coconuts in the English records than he adduced in non-English sources predating 1498. (Fritz, Die Gefaße, 13, 25-27)."
(29) "Aside from the Raine volume already cited, these include: Sharpe, "*Calendar of Wills Proved*"; Darlington, "*London Consistory Court Wills*"; Boatwright, Habberjam, and Hammond, "*The Logge Register*"; Weaver, "*Medieval Somerset Wills*"; Foster, "*Lincoln Wills*"; Gibbons, "*Early Lincoln Wills*"; "*Testamenta Eboracensia*."

(30) Boatwright, Habberjam, and Hammond, "*The Logge Register*," Wills numbered 12, 27, 33, 52, 55, 75, 78, 87, 89, 99, 122, 130, 172, 199, 246, 262, 303, 309, 317, 320, 361.
(58) The classic text on Venice continues to be Lane, "*Venice*," 126. For shipping into Southhampton, see Quinn, "*The Port Books*, 2:xvii.
(59) ibid.
(64) For the port records used in this article see QUINN, "*Port Books*": volume one covers 1469-1470, and volume two covers 1461-1464, 1472-1473, and 1477-1481; James, "*Port Book*"; Lewis, *"The Southampton Port"*; Studer, "*Port Books*"; Flavin and Jones, "*Bristol's Trade*"; Cobb, "*Overseas Trade*"; Gras, "*Early English Customs Systems*." The London particular accounts of the petty custom are largely incomplete, and many accounts that do remain have been relatively heavily damaged. Both Cobb and Gras note difficulty finding intact, legible series to edit: Cobb, "*Overseas Trade*, Appendix B," and Gras, *"Early English Customs*," 452-53. In addition, I examined the cargo of galleys listed in Kew, National Archives, MSS E. 122/77/2 (1409-1411), E. 122/194/11 (1461-1462), E. 122/194/12 (1462-1463), and E. 122/194/20 (1472-1473), among others. The amount of detail provided by different customs officers, called controllers, can vary significantly.
(65) Compare the port records of the ship **Bernardus Bondemer** in Southampton (Quin, "*Port Books*," 2: 195) to its trade in London (Cobb, "*Overseas Trade*," 46-51).
(66) Gras, "*Early English Customs*," 514, and Cobb, "*Overseas Trade*," 46-51.
(68) Pegolotti includes the coconut in a list of spices, but that is his sole mention. (Evans, Francesco Balduci, Pegolotti, 295). Fritz also notes such absences as common outside of England as well (Die Gefaße, 15).
(69) Van der Veen*, "*Consumption, Trade and Innovation*," 48-49: Walshaw, "*Converting Rice*," 140-41. Walshaw claims that Cappers* identifies the coconut as a Roman domesticate, but I cannot find that Cappers does so **[Cappers does not]**. For a recent genetic study proving very early domestication of coconut palms in both India and the Philippines, see Gunn*, Baudouin*, and Olson*, *"Independent Origins*."
(70) For archaeological evidence of the importation, but not native propagation, of coconuts into Egypt and its environs, see Cappers*, "*Exotic Imports*," 197-206; Van Der Veen*, "*Trade and Diet*," 207-12, **[author claims does not exist]** and "*Consumption, Trade and Innovation*," 49. Van der Veen*, "*Trade and Diet*," 211 **[author claims does not exist]**, notes that the coconuts were consumed locally as well as shipped farther afield.
(71) & (72) Van der Veen*, "*Consumption, Trade and Innovation*," 49, and Van der Veen*, *"Trade and Diet*," 208 & 188 **[author claims does not exist]**.
(73) For African evidence, see Walshaw, "*Converting Rice*," 141-42; for high medieval importation evidence, and evidence from the 11th to 14th century see Van der Veen* "*Trade and diet*" **[author claims does not exist]**.
(75) Cobb, "*Overseas Trade*," 46-51, and Gras, *"Early English Customs*," 452-514.



Created by: Miles Ballew

"During the Roman period thousands of miles of stone aqueducts were constructed emanating from points around the empires fringe, heading back to Rome. These marvels of engineering had but one purpose – allow coconuts to float along these waterways, back to the eager caesarean cafes for culinary creations, palm balms and powerful perfumery. This darling drupe dazzled and deceived from Domitian (AD 81-96) to Diocletian (AD 284-305). Let us hope it no longer deludes you too!"

That's No Coconut, Lady!

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2. "*Review of, Archaeology of the Invisible: The Scent of Kha and Merit*." By J. La Nasa, et. al., 2022. Published in Journal of Archaeological Science 141, **See pgs. 1-14**. Review by Dora Goldsmith, Ph.D.

"Excerpts from Review: This letter was written with no personal animosity toward the authors of the above entitled paper, but with the desire to both maintain the high standards of modern Egyptological research and ensure the dissemination of accurate research to members of the academic community and beyond… It becomes clear that the article is merely a description of the potential the technology SIFT-MS can offer for the analysis of organic residues and does not give any insight into the olfactory heritage of the tomb of Kha and Merit… Nevertheless, one must be aware of the fact that the textual record represents what the literate elite deliberately chose to discuss, and as a result, it might not reflect the odor perceptions of the entire society. When employing archaeological evidence to reconstruct ancient smellscapes, we are missing the so called "period nose," but we might find invaluable pieces of information that are not mentioned in the texts… Unfortunately, most of the jars from the tomb of Kha and Merit were hermetically sealed with linen cloth, thus their contents were not available. By putting the sealed opening of the vessels in a plastic bag and carrying out a chemical analysis, the researchers only chemically analyzed the linen cloth and modern residues on the jars… That ancient Egyptian perfumes contained oils, fats and beeswax is something that we have known since the beginning of Egyptology. It was the perfume ingredients that made ancient Egyptian perfumes fragrant. Vegetable oils, animal fat and beeswax functioned as base materials in ancient Egyptian perfumery, and have a very faint smell, if any at all. Common perfume ingredients were myrrh (Commiphora spp.), styrax resin and bark (Styrax and Liquidambar spp.), camphor bark (Ocotea spp.), mastic (Pistacia spp.), cedar resin and bark (Cedrus spp.), juniper berries and bark (Juniperus spp.), pine resin and bark (Pinus spp.), frankincense (Boswellia spp.), and nutgrass (Cyperus spp.)… Furthermore, I would like to highlight a few methodological issues in the article. On pp.11, the authors claim that the materials identified in the bowls "were in agreement with the ingredients to produce hair ointments, as reported by Dioscorides." Employing Greek and Latin sources to make statements about the olfactory culture of ancient Egyptians in the 18th Dynasty, as done by Manniche in the book "Sacred Luxuries" published in 1999, is an inaccurate approach that leads to misinformation. A close look at Greek descriptions of Egyptian perfumes reveals that while the Greeks did have some core knowledge of ancient Egyptian perfumery, they treated the original ingredients with great flexibility, freely changing many to ingredients available at their time and location. All currently available data considered, the Greek knowledge of Egyptian perfume recipes and the cultural significance of Egyptian perfumes seems quite limited. Thus, I would like to call for

caution with utilizing classical sources for making statements about the olfactory culture of the Egyptians, especially in the 18th Dynasty."

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4. *"Fish, Fruit and Beeswax: What an Ancient Egyptian Tomb Smells Like*." By Marc Espanol, Apr. 20, 2022. EL PAIS Online. Science & Tech, Ancient Egypt. https://english.elpais.com/science-tech/2022-04-20/fish-fruit-and-beeswax-what-an-ancient-egyptian-tomb-smells-like.html

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6. "*The archeology of smell: Behind this UH professor's ongoing quest for Cleopatra's perfume*." By Alicia Lou, Contributing Writer. Updated Apr 19, 2022 https://www.manoanow.org/kaleo/features/the-archeology-of-smell-behind-this-uh-professor-s-ongoing-quest-for-cleopatra-s-perfume/article_39da1524-c054-11ec-b8c5-e37b913eac49.html

"Their final combination of ingredients, method, and temperatures, produced "an extremely pleasant, elegant and sweet scent," that primarily smelled of ***myrrh and cinnamon****, and "remained potent for almost two years." "The Mendesian perfume opened up a world of scent composing that hadn't been there before," Coughlin said. "The classical recipe for the Mendesain stays pretty much intact. It's actually remarkable. From all the evidence that we have, we know that the recipe doesn't change from the moment it appears in the Greek or Latin sources for 800 years. It's just like a brand name. You know, like, Chanel No. 5 doesn't change. It just stays the same."*

7. "*The archeology of smell: Behind this UH professor's ongoing quest for Cleopatra's perfume*." By Alicia Lou, Contributing Writer. Updated Apr 19, 2022 https://www.manoanow.org/kaleo/features/the-archeology-of-smell-behind-this-uh-professor-s-ongoing-quest-for-cleopatra-s-perfume/article_39da1524-c054-11ec-b8c5-e37b913eac49.html

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"Doum palm was considered sacred by the ancient Egyptians, and the seed was found in many pharaoh's tombs. On September 24, 2007, it was announced that a team of Egyptian archaeologists discovered eight baskets of 3000-year-old doum fruit in King Tutankhamun's tomb. The fruit baskets were each 50 centimeters high, the antiquities department said. The fruit are traditionally offered at funerals."

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20. Figure #3. "*Doum Palm (Hyphaene thebaica)."*

21. Figure #4. "*Argune Palm (Medemia argun)*." Courtesy Haitham Ibrahim, Nakhila Oasis, Egypt. https://www.palmpedia.net/wiki/File:Medemia-_nakhila-oasis-Credit-Haitham-Ibrahim.jpg#filelinks

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"One of many daily ritual prayers in Egypt at this time, The Thoth papyrus mentions the important Doum Palm for all that it gives to man."

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29. Figure #6. "*Doum Palm Seed*." Courtesy of Rene Cappers. **See pg. 93**.

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> *"Venetian explorer Marco Polo encountered coconuts in Sumatra, India, and the Nicobar Islands between 1254 to 1324 C.E.* **[**Polo returned to Venice in 1292**]** *He was so impressed by the nut that he called it Pharoah's Nut. He was well aware that during the 6th-century* **[**no, 7th century**]***, Arab merchants brought coconuts back to Egypt probably from East Africa where the nuts were flourishing. There are many more such references to this wonder fruit in the pages of travel around the world. However, Indians love to believe that the coconut is of Indian origin because of the very early references to it in Indian literature and also in travelogues of foreign travelers."*

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"Abstract: This Dover edition is reprinted from the third edition (1903), revised and updated by Henri Cordier, of the magnificent translation made by Sir Henry Yule in 1871. Of inestimable value are the extensive notations by Yule that clarify and expand each chapter of the book."

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"See the complete listing of names for coconut throughout the world."

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"Oral literature abounds with proverbs, fables, myths, and legends associated with this special nut and have been associated with the origin of the plant in India, Malaysia, Hawaii, Myanmar, Maldives, Philippines, Indonesia, and Polynesian countries."

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"When cargoes arrived via the Red Sea, many had to be sold to the government at fixed prices. Sidebotham (1986) refers to P. Tebtunis 35 (ca. 111 BC), which suggests a Ptolemaic government monopoly on myrrh, and an earlier edict 'The Revenue Laws' of Ptolemy II (259 BC)."

56. "*Roman Foodprints of Berenike: Archaeobotanical Evidence of Subsistence and Trade*." By Rene J.J. Cappers. Published Aug. 1, 2006. University of California at Los Angeles, Cotsen Institute of Archaeology Press. **See pg. 74**.

*"**Pg. 78**. Plant remains recovered at Quseir from Roman period levels produced evidence of Indian foodstuffs. These included black pepper & rice from deposits dating to early AD 1 c (Peacock, et. al., 2000). Third is the Coconut from the same deposits, as well as from deposits dated to AD mid-2 c. Remains of coconut consisted of some fragments of epicarp & fibrous husk, as well as nut shell. No endosperm (meat) was present."*

57. "*Roman Foodprints of Berenike: Archaeobotanical Evidence of Subsistence and Trade*." By Rene J.J. Cappers. Published Aug. 1, 2006. University of California at Los Angeles, Cotsen Institute of Archaeology Press. Chapter 5. **See pg. 139**.

58. "*Roman Foodprints of Berenike: Archaeobotanical Evidence of Subsistence and Trade*." By Rene J.J. Cappers. Published Aug. 1, 2006. University of California at Los Angeles, Cotsen Institute of Archaeology Press. **See pg. 77**.

59. "*Swahili Urbanization, Trade, and Food Production: Botanical Perspectives from Pemba Island, Tanzania, 600-1500 AD*." By Sarah Catherine Walshaw, Dec. 2005. Washington University, Saint Louis, Missouri. **See pg. 105**.

*"**See page 2**. Geographically restricted to a long narrow strip of the eastern African coast, the Swahili were and are an ethnic group in which people share a common language (Swahili), religion (Islam, once Bantu), and positioned between the African and Indian Ocean spheres. The nature of early Swahili life has recently received much attention from archaeologists working in the region (Horton and Middleton 2000; Kusimba 1999; LaViolette and Fleisher 2005). Swahili stonetowns bearing stone and coral houses, mosques, and occasionally city walls appeared by AD 1000, probably functioning as marketplaces and Islamic centers as connections intensified between Africa and the Indian Ocean world. Historically, Swahili stonetowns were considered to be non-African, created and controlled by Arab centers (Hull 1976:120; Kusimba 1999:51). Recent investigations, however, have revealed the distinctly African foundations of Swahili language (Nurse and Spear 1985), society (Allen 1993), and material culture and architecture (Horton 1996). Thus, Swahili patterns of urbanization must now be reconsidered in the context of local, indigenous precursors to urbanism (Fleisher 2001). A Swahili cultural development, not of Arab genesis."*

60. "*Swahili Urbanization, Trade, and Food Production: Botanical Perspectives from Pemba Island, Tanzania, AD 600-1500.*" By Sarah Catherine Walshaw, December 2005. St. Louis, Missouri. **See pg. 73**.

"Sweet banana and coconut appear to be important by the end of 1st millennium AD according to linguistic studies (Blench, 1994; Wigboldus 1994-95)

61. "*Roman Foodprints of Berenike: Archaeobotanical Evidence of Subsistence and Trade*." By Rene J.J. Cappers. Published Aug. 1, 2006. University of California at Los Angeles, Cotsen Institute of Archaeology Press. **See pgs. 139, 140**.

62. Figure #7. "*Northeastern Monsoon Winds*." By Paul Scholte & Pierre De Geest, 2010. From *The Climate of Socrata Island (Yemen): A first-time assessment of the timing of the monsoon wind reversal and its influence on precipitation and vegetation patterns*. Journal of Arid Environs. 74. **See pg. 1509**. 10.1016/j.jaridenv.2010.05.017. Diagram originally labeled "ITCZ, Situation in January: NE Monsoon."

63. Figure #8. "*Southwestern Monsoon Winds*." By Paul Scholte & Pierre De Geest, 2010. From *The Climate of Socrata Island (Yemen): A first-time assessment of the timing of the monsoon wind reversal and its influence on precipitation and vegetation patterns*. Journal of Arid Environs. 74. Pg. 1509. 10.1016/j.jaridenv.2010.05.017. Diagram originally labeled "ITCZ, Situation in July: SW Monsoon."

64. "*Roman Foodprints of Berenike: Archaeobotanical Evidence of Subsistence and Trade*." By Rene J.J. Cappers. Published Aug. 1, 2006. University of California at Los Angeles, Cotsen Institute of Archaeology Press. **See pg. 147**

65. Figure #9. "*Duration of Voyages*." By Rene J.J. Cappers. Published in *Roman Foodprints of Berenike: Archaeobotanical Evidence of Subsistence and Trade*. Published Aug. 1, 2006. University of California at Los Angeles, Cotsen Institute of Archaeology Press. **See pg. 79**

66. "*Roman Foodprints of Berenike: Archaeobotanical Evidence of Subsistence and Trade*." By Rene J.J. Cappers. Published Aug. 1, 2006. University of California at Los Angeles, Cotsen Institute of Archaeology Press. **See pg. 79**.

67. "*Roman Foodprints of Berenike: Archaeobotanical Evidence of Subsistence and Trade*." By Rene J.J. Cappers. Published Aug. 1, 2006. University of California at Los Angeles, Cotsen Institute of Archaeology Press. **See pg. 142**.

68. "*Roman Foodprints of Berenike: Archaeobotanical Evidence of Subsistence and Trade*." By Rene J.J. Cappers. Published Aug. 1, 2006. University of California at Los Angeles, Cotsen Institute of Archaeology Press. **See pg. 159**.

69. "*Roman Foodprints of Berenike: Archaeobotanical Evidence of Subsistence and Trade*." By Rene J.J. Cappers. Published Aug. 1, 2006. University of California at Los Angeles, Cotsen Institute of Archaeology Press. **See pgs. 78-79**.

70. "*Roman Foodprints of Berenike: Archaeobotanical Evidence of Subsistence and Trade*." By Rene J.J. Cappers. Published Aug. 1, 2006. University of California at Los Angeles, Cotsen Institute of Archaeology Press.

"Tables 1.1. Trade items of botanical origin mentioned in the Alexandrian Tariff (AT) and the Periplus Maris Erythraei (PME)." **See pg. 4**.

"Table 1.2. Trade items of botanical origin according to the Periplus (D = dye, F = food, M = medicine, R = resin, gum, bark, W = wood, I = import item, E = export item, B = both import and export item, BE = Berenike, OP = other ports)." **Page 7**.

"Table 4.2. Presence of wild plant species, including (potentially) cultivated species, in the archaeobotanical records of Berenike and Shenshef, and their

geographical distribution in Egypt. Abbreviations: CU = cultivated; BE = Berenike; SS = Shenshef; M = Mediterranean coastal strip; N = Nile Region including delta and Fayum; O = Oases; Dw = Western Desert; De = Eastern Desert; R = Red Sea coastal strip; S = Sinai; GE = Gebel Elba." **See pg. 136**.

"Table 6.1. Classification of cultivated plants from Berenike (BE) and Shenshef (SS) according to their possible use as indicated by the recovered plant remains. Abbreviations: CE = cereals, PU = pulses, VT = vegetables and tubers, FP = fruit plants, CS = condiments and spices, OF = oil, incense and fiber crops, DT = dye- and tannin-producing plants, MI = miscellaneous." **See pg. 157**.

"Table 6.3. Presence of fruits, seeds and bulbs from cultivated plants at Berenike (BE) and Shenshef (SS) in relation to the habitation period. 1 = 1 specimen. 2 = 2–5 specimens. 3 = 6–10 specimens. 4 = 11–50 specimens, 5 = 51–100 specimens. 6 = 101–500 specimens. 7 = 501–1000 specimens. 8 = 1,001–5,000 specimens. x = not quantified." **See pg. 163**.

[No Coconut or coconut material were identified in any of the above tables**].**

71. "*Roman Foodprints of Berenike: Archaeobotanical Evidence of Subsistence and Trade*." By Rene J.J. Cappers. Published Aug. 1, 2006. University of California at Los Angeles, Cotsen Institute of Archaeology Press.

"See Trade items of botanical origin mentioned in the Alexandrian Tariff (AT) and the Periplus Maris Erythraei (PME). The ostraka represent several archives, which document customs duties at Berenike and are possibly linked to the transportation of goods between Berenike and Koptos (Bagnall et al. 1999, 2000). Commodities that are mentioned are wine, imported from Syria, Italy, and Rhodes; olive oil; vinegar; flatbread; lykion; onions (Allium); beets (Beta vulgaris); and barley (Hordeum vulgare). The most common commodity mentioned in the ostraka is wine."

[No Coconut or coconut material were identified in any of the above trade documents**].**

72. Figure #10. *"Ancient Bas-Relief of a Palm."* Graphic in *Cracking Coconut's History*, *Aramcoworld Online*. By Ramin Ganeshram, Jan/Feb 2017. G. Dagli, Orti/Bridgeman Images. Aleppo Archaeological Museum. **[**Now known as the National Museum of Aleppo, Syria**].** https://www.aramcoworld.com/Articles/January-2017/Cracking-Coconut-s-History

"Carried much earlier by Arab traders into Mesopotamia, a coconut palm was depicted in a bas-relief." **[**not true**]** *"But historians also agree that coconuts traveled at the hands of men, and it was most likely seafaring Arab traders who carried coconuts from India to East Africa as much as 2000 years ago."* **[**not true**]** *"These same traders also introduced coconuts to Europeans, first along the trans-Asian Silk Roads. Among them was the Venetian adventurer Marco Polo, who encountered the tree in Egypt in the 13th century, calling its fruit "the Pharaoh's nut."* **[**not true**]**

73. "*Oak Island Archaeology Update: Just how Surprising is the Coconut Fiber?*" Article published online at *Archeothoughts. Wordpress.com*. Mar. 10, 2020. https://archeothoughts.wordpress.com/2020/03/10/oak-island-archaeology-update-just-how-surprising-is-the-coconut-fiber/?fbclid=IwAR2wzjw0OR35OaBccVXqzPZRRqZ1CSqvojq4zQYJxU6ZdySBrbRVs8A24Lg

74. *"HMS Victory 100-gun First Ship-of-the-Line."* By JR Potts. AUS 173d AB, Oct. 16, 2020. Naval Warfare Ships, Militaryfactory.com.

> *"In 1758, the Board of Admiralty ordered the first of twelve, new 'ships of the line,' with the first of the 100-gun first-rate ships named the HMS Victory. The Victory required 6000 fully mature Oak trees, a mixture of 8000 Fir, Elm and Pine trees, 4 acres of fabric for its 23 sails,* ***and 26 miles of flax and hemp rope, the thickest rope being 19" in circumference****. Forty-seven years later, under the command of Sir Admiral Nelson, the HMS Victory would sail into British naval history just off the coast of Trafalgar. The timber, however, did not come from Nova Scotian forests, but from the remaining Ashdown Forest in the weald of Kent and Sussex."*

75. *"The Halifax Naval Yard and Mast Contractors, 1775 – 1815." By Julian Gwyn. Public Record Office, ADM106/1653, Wentworth to Navy Board, June 14, 1816. The Northern Mariner/Le marin du nord, XI, No. 4 (Oct. 2001),* **See pgs. 1-25***.*

> *"By 1801 the British Navy Board estimated they needed about 18000 tons of timber,* ***13,000 tons of hemp to make about 15260 tons of cordage****, 1400 tons of iron, 949 tons of copper, 200 tons of copper bolt staves, 18000 barrels of tar, 5500 barrels of pitch, 371000 deals, 500 masts, and 111000 wooden blocks. The cost was £2.9 million. Half of these masts would come from North America."*

76. "*When Was the Medieval Period and How Long Did it Last?*" By Oliver Fletcher, Dec. 9, 2018. Published Online at HistoryHit.com.
https://www.historyhit.com/when-was-the-medieval-period-and-how-long-did-it-last/

77. "*When Was the Medieval Period and How Long Did it Last?*" By Oliver Fletcher, Dec. 9, 2018. Published Online at HistoryHit.com.
https://www.historyhit.com/when-was-the-medieval-period-and-how-long-did-it-last/

78. "*When Was the Medieval Period and How Long Did it Last?*" By Oliver Fletcher, Dec. 9, 2018. Published Online at HistoryHit.com.
https://www.historyhit.com/when-was-the-medieval-period-and-how-long-did-it-last/

79. *"Gripping It By The Husk: The Medieval English Coconut." By Kathleen E. Kennedy. Published in* The Medieval Globe, Volume 3, Issue 1, 2017. Arc Humanities Press.

80. "*Rife*." Merriam-Webster.com dictionary. (Accessed Mar. 13, 2024. Definition."
https://www.merriam-webster.com/dictionary/rife

81. "*Society, Economy and the Law in Fourteenth-Century England*." By Professor Mark Bailey. Published Online @
https://www.history.ox.ac.uk/society-economy-and-law-fourteenth-century-england

82. "*Society, Economy and the Law in Fourteenth-Century England*." By Professor Mark Bailey. Published Online @
https://www.history.ox.ac.uk/society-economy-and-law-fourteenth-century-england

83. "*Great Britain and Ireland, 1400–1600 AD."* Heilbrunn Timeline of Art History Online.
https://www.metmuseum.org/toah/ht/08/euwb.html

84. "*Roman Foodprints of Berenike: Archaeobotanical Evidence of Subsistence and Trade*." By Rene J.J. Cappers. Published Aug. 1, 2006. University of California at Los Angeles, Cotsen Institute of Archaeology Press. **See pg. 9**.

85. "*Coconut Time Line*." Ancient Period (before 1498) & Nautical Period (1499-1839). Online. http://cocos.arecaceae.com/nautical.html

86. "*Live Auction – 1421, Important English Furniture Including the Paley Collection, 1700s*." Christies Online Auction House. https://www.christies.com/en/lot/lot-4356582

87. "*Observations on the Morphology, Pollination and Cultivation of Coco de Mer (Lodoicea maldivica (J.F. Gmel.) Pers., Palmae)*." By Stephen Blackmore, et al. 2012. Published in Journal of Botany, 2012. https://doi:10.1155/2012/687832 .

Below, are email communications between palm experts and this author. The first is from Professor Emeritus of Archaeology, Archaeobotanist and author Marijke Van der Veen and David H. Neisen. It regards an article, wherein Van der Veen is cited in a book called "*Trade and Diet*," with reference to particular pages. This reference was made by the author shown in Endnote #76 above. Other chapters within this book include appropriate excerpts of emails or their entirety. Fields are blocked out to protect their privacy.

From: Van Der Veen, Marijke (Prof.) [redacted]
Sent: Monday, May 22, 2023 5:13 AM
To: David H Neisen [redacted]
Subject: Re: Trying to Locate your document "Trade and Diet."

Dear David

I think the 'trade and diet' you refer to might be a reference to an old interim chapter (see below Van der Veen 2003), though the 188 does not match the page numbers. The data discussed in that chapter are discussed with all the data from that site in my 2011 book. I have written two other chapters in which trade and diet feature, which I attach. I hope this answers your question.

best wishes, Marijke

Van der Veen, M. 2011. *Consumption, Trade and Innovation: Exploring the Botanical Remains from the Roman and Islamic Ports at Quseir al-Qadim, Egypt*. Frankfurt: Africa Magna Verlag. ISBN 9783937248233.

Van der Veen, M. and Morales, J. 2015. The Roman and Islamic spice trade: new archaeological evidence. *Journal of Ethnopharmacology* 167: 54-63.

Van der Veen, M. 2003. Trade and diet at Roman and medieval Quseir al-Qadim, Egypt: a preliminary report. In K. Neumann, A. Butler and S. Kahlheber (eds.) *Food, Fuel and Fields. Progress in African* Archaeobotany. Cologne, Heinrich Barth Institute, pp. 207-212.
(THIS IS AN OLD INTERIM, superseded by the 2011 book)

Van der Veen, M. and Morales, J. 2017. Food globalisation and the Red Sea: new evidence from the ancient ports at Quseir al-Qadim, Egypt. In Agius, D.A., Khalil, E., Scerri, E.M.L. and Williams, A. (eds) Human Interaction with the Environment in the Red Sea. Selected Papers of Red Sea Project VI. Leiden: Brill, pp. 254-289.

Prof. Marijke van der Veen
Emeritus Professor of Archaeology
School of Archaeology & Ancient History

From: Sureshkumar [redacted] Muthukumaran <[redacted]>
Sent: Wednesday, May 31, 2023 4:30 AM
To: [redacted]
Subject: Re: Professor Marijke Van Der Veen Recommended you

Dear David,
Thank you for your email.
There are no textual records for contact between the New World and coconut-producing regions of the Old World so I can help you there. For the late antique/medieval Middle East, apart from southern Arabia, there's also an unpublished record of coconuts in a Middle Persian source relating to temple estates (Middle Persian anargel < Sanskrit narikela). [See below…]

"Mentions of the coconut are found in Pahlavi literature. In the classification of fruits in the *Bundahišn* (tr. Anklesaria, chap. 16, par. 26, pp. 150-51), the *anargel* is mentioned as one of ten fruits of which only the "inside" is edible; the author of the Pahlavi story *King Husrav and His Boy* (Unvala, par. 50, p. 25; Monchizadeh, par. 50, pp. 55, 74) praises it as one of the best *dārēnak* (Unvala: "shell fruits"; Monchizadeh: *šavēnak* "dried fruits eaten at night"; both readings and interpretations uncertain) when it is eaten with sugar, explaining that *anārgīl* was the Hindi name of this fruit, which was called *gōzī hindūg* (Indian nut) in Middle Persian (later Pers. *jowz-e hendī* [now obsolete] and current Ar. *al-jawz al-hendī* or *jawz al-Hend* "nut of India"). There is evidence that, before 1498 ce, when the Portuguese began to carry this fruit (dubbed *côco*, a word of uncertain origin) by sea from India to Europe, Europeans had referred to it by variants of *(a)nārgīl* or calques of *jowz-e hendī* (e.g., Cosmas Indicopleustes, who traveled as far as Ceylon and western India before ca. 547: "Argell, i.e. the great Indian nut"; Friar Jordanus [ca. 1328]: *nargil*; John Marignolli [ca. 1350]: *nargil* and "Indian nut"; for these and other instances, see Yule and Burnell, pp. 228-29)."

Best of luck with your project! Kind Regards, Suresh

Dr. Sureshkumar Muthukumaran, MSt (Oxon) PhD (Lond)
Lecturer (History)
National University of

From: Muriel Gros-Balthazard <[redacted]>
Sent: Friday, April 7, 2023 2:19 AM
To: [redacted]
Subject: Re: Methuselah Palm / Phoenix dactylifera

Dear David, Thank you for reaching out!

Would you be able to provide some additional information about yourself and your relationship to this topic, so that I can better understand your perspective?

I understand that you are attempting to determine the species that the fibers belong to. I was wondering how they were found? What is the context (tomb or else?). Why are you specifically wondering about the Levant, Arabic peninsula and other Mediterranean areas? Is there indications the fibers originate from those regions? Anyway, to reply to both questions:

1) To my knowledge, coconut was not grown in the specified regions, today they might be but this is very recent and for ornamental purpose.

2) The fibers of date palms have always been used to make cordage and other things (and are still in use). I attached a pic here.

Hope this helps! Best, Muriel (Dr. Muriel Gros-Balthazard)

IRD - Institut de Recherche pour le Développement
(French National Research Institute for Sustainable Development)
