

Frankincense: traditions rooted in the Sudanese DNA



Abstract: Frankincense is an ancient produce that continues to be a major commercial product in Sudan. Incense remains an important commodity in everyday life and a source of income. It serves as a living link between the past and the present that is rich in religious, social, cultural and economic history. Resins are utilised for medicinal, cultural, religious and funerary practices in ancient and present times. Yet, Sudan's considerable contribution to trade in aromatics has largely been understudied. This study is based on ethnographic research as well as the author's own and her family's experiences. The paper examines the use and trade of incense from the ancient past to the present and contemporary usages. The research demonstrates Sudan's substantial contribution to incense trade through time. The study suggests that there is a need to reevaluate the role played by this region. This is a pressing issue owing to threats to archaeological sites caused by mega-development and mineral exploration.

Keywords: frankincense, Sudan, eastern Sudan, trade, trade routes, contemporary use, medicinal use, threat

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The ethnographic interviews conducted by the author in 2016–2017 were designed to gain knowledge from Sudanese women about their use of frankincense, myrrh and other aromatic oils, as well as the wood they use. Questions included how are aromatic perfumes prepared? where are the ingredients purchased? what are the prices and availability of the products? where are the perfume containers coming from? The interviewees were very generous in sharing their traditional knowledge with the author.

INTRODUCTION

Frankincense and myrrh are aromatic resins used in incense, perfumes and a wide range of other purposes. Frankincense is produced by small pine-like trees of the genus *Boswellia*. *Boswellia* trees are mostly found in the arid mountainous regions of eastern Africa (Eritrea, Somalia, Ethiopia and Sudan), southern Arabia (Oman and Yemen) and north-western India (Howes 1950; Hepper 1969; Tucker 1986; Brettell, Stern, and Heron 2013). Myrrh is another natural gum resin extracted from a thorny tree which belongs to the species of the genus *Commiphora* and mostly grows in dry inland areas in Somaliland, Saudi Arabia, Ethiopia, Eritrea, Sudan and India (Hedberg and Edwards 1989; El Amin 1990; Coppen and Hone 1995; Mahmoud 2005).

Frankincense has been traded on the Arabian Peninsula and in North Africa from time immemorial. The trade in frankincense and myrrh has been attested by numerous archaeological and historical sources as far back as 3300 BCE (Amin 1970; Adams 1964; 1977; Lobban 2003). Frankincense resin was used in the past for a range of medicinal, religious and social purposes, and many of those functions continue both in the East and the West. The Kushites, Egyptians, Meroites, Assyrians, Persians, Romans, Greeks, the people of India, China and the Indus valley have all valued and used it. Both resins have been used by many societies and religions, and thus represent two of the oldest international trade items (Lobban 2003).

The oldest evidence of the use of incense was discovered in Nubia (Qustul) and dates back to 3300 BCE (Amin 1970;

Adams 1964; Lobban 2003). Annals of trade in incense come from the Egyptian Old Kingdom. A record from the Sixth Dynasty documents a journey to Nubia to obtain aromatic oils as well as other goods (Lobban 2003). In addition to Nubia, Egypt acquired aromatic plants from the “Land of Punt”. The exact location of Punt is still debated by many scholars. Currently, many scholars suggest an African rather than a south Arabian location, to the southeast of Egypt, and in all likelihood located in the coastal region of today’s Eritrea, Ethiopia and Sudan (I will come back to this point later) (Kitchen 1971; 1993; 2004; 2012; Fattovich 1991a; 2004; 2007; 2012; Bard and Fattovich 2007; 2013; Bard, Fattovich, and Ward 2007; Manzo 2010; 2012a; 2012b; 2014).

This paper is not restricted exclusively to the Red Sea region and includes the river Nile and the rest of the Sudan. Essentially, because I believe coastal areas and harbours, were interlinked and interconnected to their hinterlands and it is meaningless to separate the two. All Sudanese ports, that is Badi, Akik, Ayzab and Suakin, were linked to hinterlands as well as to the Red Sea coast and the outside world. Caravans transported exotic products from the hinterlands to the coast and vice versa (Al Shamiy 1961; Dirar 1981; Nawata 1997; Taha 2013; Phillips, Smith, and Taha forthcoming).

Whilst the Nile valley (Egypt and Sudan) and the Horn of Africa (Somalia, Eritrea and Ethiopia) have received much scholarly attention, the Sudanese coastline and eastern region have been rather overlooked until very recently. Using

ethnographic research, the present paper aims to emphasise the considerable role played by Sudan, both by sea and land, in the production, use and trade of aromatic resin gums. The first part explores the use and trade of frankincense through history. The second part investigates incense production and trade in present-day Sudan. The last section examines con-

temporary use of aromatics in Sudan. My ethnographic research—which includes a series of unpublished interviews conducted in 2016 and 2017—complements archaeological, geographical, historical and archival research. The study suggests that there is a need to rethink the part played by this region in the ancient trade of incense.

JOURNEY THROUGH TIME: INCENSE USE AND TRADE IN EARLY SUDAN

Frankincense and myrrh were used for funerary, religious and medicinal purposes throughout ancient times in Sudan.

Botanical remains have yet to be discovered, but then organic materials seldom do survive. Thus, knowledge about the



Fig. 1. Incense burner, from a tomb in Qustul, Nubia, Sudan, A-Group (3200–3000 BCE) (Institute for the Study of Ancient Cultures Museum, The University of Chicago) / Wikimedia Commons / CC-BY-SA-3.0

use of incense comes predominantly from cemeteries. Both archaeological artifacts, such as containers, bottles and incense burners, as well as iconography—in wall painting and carvings—have been found in tombs and temples. The data suggests that aromatic gums have been used in Nubia since the Neolithic period (Amin 1970; Adams 1977; Lobban 2003; Hafsaas-Tsakos 2009a). The oldest recognised evidence of trade in incense derives from the Egyptian Old Kingdom Sixth Dynasty's account of a voyage to the land of Yam (the Kingdom of Kerma). The main purpose of the journey was to acquire incense, fragrant oils and other merchandise (Lobban 2003).

A-GROUP

Although Qustul tombs were heavily plundered, nonetheless ceramic sherds, jewellery, stone vessels and ceremonial objects such as incense burners were discovered in the Qustul cemetery by Keith C. Seele, a professor at the University of Chicago in 1963 (Trigger 1969; Williams 1986; O'Connor 1993; Williams 1996). The evidence indicates that the oldest incense burners at Qustul in Nubia date to 3300 BCE (Adams 1977; 1985; Rensberger 1979; Lobban 2003; Roy 2011) [Fig. 1]. Archaeological finds suggest that the A-Group people were wealthy individuals and traders who supplied Egypt with raw materials, for instance ivory, ebony, incense and exotic animal skins (Amin 1970; Adams 1964; Trigger 1969; Lobban 2003; Hafsaas-Tsakos 2009a; 2009b; Török 2009). In my opinion, this evidence is one of the earliest examples of the use and trade in aromatics discovered so far.

KINGDOMS OF KERMA AND NAPATA

The flourishing of the kingdoms of Kerma and Napata was because of their excellent geographical location. The two were tremendously wealthy empires and thrived over a long span of time. Commerce was an important constituent of the Kushite economy, and seems to have been centrally managed and organised. Kush was the passage for goods to and from Egypt (Almond, Ahmed, and Shaddad 1984; Shinnie 1996; Welsby 1996; Bonnet 1997; Kendall 1997). During this time the Kushites established themselves very effectively as middlemen between sub-Saharan Africa and Egypt and controlled the interchange of merchandise in luxury commodities to Egyptian Pharaohs, which included gold, ivory, precious wood, wild animals and aromatics from the interior of the continent, in exchange for manufactured items from the Mediterranean (Adams 1977; O'Connor 1987; Shinnie 1991; Welsby 1998; Edwards 2004).

The great value placed on aromatics early in Sudan's history is observed in the Middle Kerma period. Grave goods of the kings included perfumed oils and ointment. In 2015, a team from the British Museum in London headed by Derek A. Welsby reported that "[S]o far, we've excavated six [pyramids] made out of stone and ten made out of mud brick" (Welsby 2016). In one tomb below a pyramid, archaeologists found an offering table which features a carving showing a priest proffering incense to the ruler of the underworld Osiris (Griffiths 2015) [Fig. 2]. Likewise, in 2009 Geoff Emberling reported that the cemetery at Al-Widay was most probably the burial place of the people who mined gold at Hosh el-Guruf.



Fig. 2. Offering table showing a priest proffering incense to Osiris, Kingdom of Kerma (SARS NDRS Archive | photo D.A. Welsby)



Fig. 3. Incense burner, Kingdom of Meroe, Sudan (British Museum Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0) licence)

Emberling and his team excavated over a hundred burials in the cemetery in 2008. The dead were buried each with an average set of three vessels, which included a cup, a bowl, and an incense pot, and sometimes with extra pots and beads made of locally available carnelian, ostrich eggshell, or faience (Emberling 2009). These finds imply that incense was a valuable item and an essential element, like food and water, to the people even in the afterlife.

KINGDOM OF MEROE

Burning of incense in funerary and religious practices is known in Nubia from a very ancient past. During the Meroitic period, objects used in the funerary rites were subsequently added to the grave goods. They have been uncovered in tombs and cemeteries, and in residential areas.

Archaeological evidence included incense burners, bowls and perfume bottles.

The finds prove that the use of aromatics was customary in everyday life for religious, medical and cosmetic functions (Török 1989; Edwards 1998; Baldi 2014) [Figs 3, 4]. Containers, perfume flasks, ointment flasks and bowls of aromatic concentrate were part of ritualistic ceremonies and were buried with the dead (Baldi 2014). In addition, knowledge regarding the use of aromatics and oils comes from images carved or painted on temple walls. Incense censers were commonly depicted, illustrating the significance of perfumes and aromatics for religious rituals and daily life. Furthermore, Classical Greek writers wrote about incense from the south of Egypt. Herodotus wrote: "... This way, then, the mountains run, and end in the places of which I have spoken; their greatest width from east to west, as I learned by inquiry, is a two months' journey, and their easternmost boundaries yield frankincense". According to Federico De Romanis, "Herodotus wrote about Egypt's Eastern Desert and the frankincense-bearing land that is one-month travel from the Nile". De Romanis believes that the incense land refers to the Sudanese regions as there was no incense in Egypt (F. De Romanis, personal communication, 5 July 2017). Similarly, Hellenistic and Roman sources mentioned the areas south of Egypt rich in resources and strategic routes (Manzo 2017).

The Meroitic state was situated where it was able to dominate land trade routes that connected the Nile and the Red Sea and as far as the African savannah (Kirwan 1959; Arkell 1961; Keating 1962; Vercoutter 1964; Shinnie and Shinnie 1965;

Shinnie 1967; 1991; Adams 1977; Edwards 1996; 2004; Kendall 1997; Vincentelli 2003; Hafsaas-Tsakos 2009a). Engravings of several caravans were found near the Second Cataract, suggesting considerable traffic between Sudan and Egypt. The list of items mentioned includes numerous exotic goods as well as myrrh and incense (Amin 1970). There were other important trade centres in the kingdom apart from Meroe; such as Wad ben Naqa, along the Nile. Remains of a temple and a palace, in which there were arched storerooms containing stockpiles of ivory, have been discovered (Shinnie 1967; 1996). Other Meroitic sites are well recognised for their stock of ebony and ivory (Welsby 1996). To the east, the city of Naga was located on the trade route connecting the Nile with the Red Sea, as was Musawwarat el-Sufra, significant as a religious and trade centre (Shinnie 1967). Evidence from literary



Fig. 4. Faience perfume vase, Kingdom of Meroe (British Museum Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0) licence)

sources and archaeological finds demonstrates that Meroe was the junction of a number of trade routes from and to Asia, Egypt and central Africa. Incense was one of the exotic export items. Thus, it is clear that trade routes were the lifeline of Kushite kingdoms and the basis of its wealth (Trigger 1985; Welsby 1996: 201; Smith 1997; Edwards 1998; Vincentelli 2003).

CHRISTIAN NUBIA

Frankincense is an integral part of church ceremonies both past and present and widespread in Christian denominations both in the East and West. The kingdoms of Nobadia, Makuria and Soba were no different.

A painting from St Raphael's Church at Tamit (in Makuria) depicts a priest with an incense burner, protected by an angel (Monneret de Villard 1957: 153) [Fig. 5]. However, there is not much material evidence for the Christian period

in Sudan, possibly because of limited archaeological attention given to this period. Additionally, just as Kushite temples were ransacked and transformed into churches with the introduction of Christianity, so churches suffered a similar fate during the Islamic period.

During the medieval period, as in Kushite times, the connection with the outside world and international trade and commerce was along the Nile and the Red Sea, which continued to be the gateway to Egypt and the Mediterranean. The Red Sea also connected Sudan with Arabia, Persia, India and the Far East (Vercoutter 1964; Shinnie and Shinnie 1965; Shinnie 1991; Adams 1977; Török 1978; Adams et al. 1979; Welsby and Daniels 1991; Welsby 2002; Edwards 2004; Le Quesne 2014). Additionally, there was a host of land routes which connected the country to the Horn of Africa and to West Africa (Taha 2013; Phillips, Smith, and Taha forthcoming).



Fig. 5. Priest burning incense, wall painting, Tamit church in Nubia, Sudan (Courtesy D. Zielińska)

ISLAMIC PERIOD

The use of incense for religious, social, cultural and medicinal purposes continued throughout the Islamic period. John W. Crowfoot discovered some archaeological evidence in Akik in 1911. The most distinctive characteristic of a group of modern Muslim tombs, built of coral blocks and painted white, were two basins at the top of each tomb, a small basin designed for incense and a larger one for water. And in Badi, Natawa found incense burners in Muslim tombs similar to those found in Akik (Nawata 1997).

The India trade flourished remarkably at Suakin. Indian merchants settled in Suakin and opened shops there. They traded in silk and perfume, sandalwood, sandalwood oil, cloves and other products. There are Indian communities still residing in Port Sudan, Khartoum and other main towns, the majority of them carrying on a family business. Extra incense, especially myrrh, was imported from Yemen. Below is an extract from a poem tribute to Suakin's golden days:

"I was upon the shore watching those
 Thrown there by the port wind
 Watching the different hordes
 Merchants of silk and silk brocade
 Others selling gold, pearls and diamonds
 And all the bottles of scent and perfume
 And what else did I see
 I saw beauty, nobleness and the ingenuity
 Of time"

(Extract from a poem entitled "Sawakin disintegrating" by Alim Abbass)

Perfume shops in Suakin were mentioned in many interviews. Here is an extract from one such account:

"[M]y parents used to tell me about Suakin, the festivals, buildings, Wakalet al-Shinawiy, the shops on the island and Gyef and the perfume shops that you smell the scent the minute you step into Suakin's gate" (Male, 40s, Khartoum).

Trade existed during the Funj Sultanate and pre-colonial period, important trading towns including Arbaji in the Gezira, Kobbel, Al Fasheir in Darfur, Bara and El Obied in Kordufan, Shendiy along the river Nile, Berber and Suakin on the Red Sea. These towns served as centres for the long distance trade (al-Maqrizī 1948; Dirar 1981; Lobban 2003; Soghayroun 2010; Taha 2013; Phillips, Smith, and Taha forthcoming). Trading items included ivory, gold, slaves, incense, animal products, pottery, baskets, mats, Arabic gum, hides, senna, camels, cattle; ostrich eggshells, gold, rhino horns and food stuffs (Bloss 1936; Al Shamiy 1961; Dirar 1981; Lobban 2003; Soghayroun 2010; Smith et. al. 2018).

Caravan trade routes criss-crossed the country and connected the Mediterranean with the Nile Valley, Darfur, Kordufan, sub-Saharan Africa and the Horn of Africa [Fig. 6]. As in medieval times, the Red Sea continued to connect Sudan with Arabia, and on to India and the Far East (Hafsaas-Tsakos 2009b; Taha 2013). The Funj Sultans negotiated agreements with tribes all over the country to keep trade routes open to Sennar.

INCENSE PRODUCTION AND TRADE IN PRESENT-DAY SUDAN

The importance of frankincense carries on to the present day, as the resin gum is still harvested from wild trees. Ethiopia, Eritrea, Kenya, Somalia and Sudan are the major producers and exporters of frankincense (Chikamai and Tchatat n.d.; Coppen and Hone 1995; Chikamai 2002; NGARA 2004). There are seven species of gum resins in Su-

dan, *Commiphora abyssinica*, *C. africana*, *C. erthraea*, *C. gileadensis*, *C. pedunculata*, *C. quadricinta* and *C. schimperi* (El Amin 1990). They are confined to a small area of hilly and stony ground in eastern and central Sudan in the Red Sea Hills, Kordufan, Darfur and Blue Nile Districts (El Amin 1990; Mahmoud 2005; El Tahir et al. 2010; Eltayeb 2015).

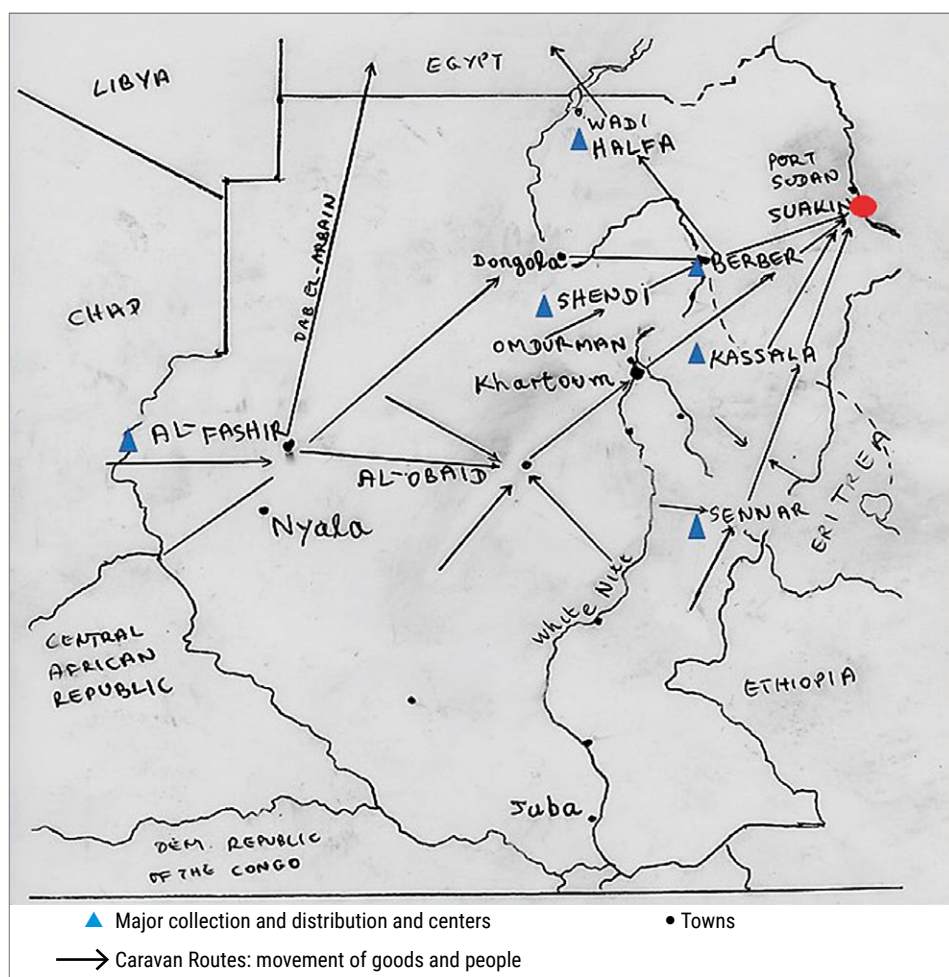


Fig. 6. Land routes-showing the port of Suakin in relation to the main collection and distribution centres (Hand-drawn map S. Taha)

PRODUCTION AND MARKETING OF GUM RESIN

Resin production in Sudan is customarily practised by local communities and tappers. After deducting fees, royalties, marketing and taxes to local authorities, the profit is divided between the merchants and tappers (Coppen and Hone 1995; Mahmoud 2005; Abtew et al. 2012; Eltayeb 2015; CBI Ministry of Foreign Affairs 2016b). Generally, the best quality resins are reserved for export and the rest are marketed locally. Resin gums are traded at rural, urban and central markets and different people are involved in the process. The product enters the rural market where it is collected by village traders and other middlemen. They then transport the product to urban markets and a central market. The main players at rural markets are local traders and producers. Taxes and local duties for frankincense trading are collected at the rural markets when the product is transported from the market and delivered to urban merchants. Different taxes and duties are collected by different government bodies at rural and urban markets. There is also a great deal of uncontrolled trading across the borders of producing countries (Chikamai and Tchatat n.d.; Coppen and Hone 1995; NGARA 2004; World Bank Group 2007; 2013).

EXPORT

Resin gums are both traded locally and exported to international markets. Resin exporters are the local dealers who purchase gum from resin merchants in a number of collection areas (Mahmoud 2005). To export the product to international markets, traders need export permits and to pay customs and other tax. Foreign buyers pay govern-

ment tax and export the resins to foreign markets. The Ministry of Finance, is the official body which monitors the producers, issues licenses and charges the taxes. The main importers of frankincense from Sudan include countries in the Middle East (e.g., United Arab Emirates and Saudi Arabia) and Europe (e.g., France, Germany, and Italy) as well as China (NGARA 2004; World Bank Group 2007; CBI 2016a). Gum resins are one of the main sources of international exchange. Gum Arabic in particular is one of the key economic products. Sudan netted around \$100 million in 2006 and 2007 from the export of gum Arabic (CBOS 2006; 2007; World Bank Group 2007). Frankincense exports generated \$153,000 in 2007 (CBOS 2007). The majority of the frankincense/olibanum produced in the country is consumed internally and hence only a limited quantity is exported (Abtew et al. 2012). More than 3700 metric tonnes of frankincense were exported from Sudan in 2001 and 2007 at the value more than £3.5 million USD (Ministry of Foreign Trade annual reports; CBOS 2006; 2007; Abtew et al. 2012; World Bank Group 2013).

Although Sudan's production of gum Arabic declined from 89% of production worldwide in the 1950s–1990s to only 50% at present, it is still the world's largest single producer. Many communities in Sudan depend on gum Arabic for their livelihood (Chikamai 2002; World Bank Group 2007; 2013; Eltayeb 2015). Gum olibanum production decreased in 2004 and 2005 due to an increase in gum Arabic price. As a result, tappers shifted from gum resin to gum Arabic production. Other factors that contributed to

the declining produce include: harsh droughts in the 1970s and 1980s, political unrest and ineffective marketing measures (Mahmoud 2005; World Bank Group 2007; 2013). In my opinion, other reasons include low economic return for tappers and the Sudanese government's greater interest in exporting other resources, such as oil and minerals, which led to the neglect of other products. Production of gum Arabic is heavily controlled by the Sudanese government (Mahmoud 2005; World Bank Group 2007; 2013; Abteu et al. 2012). Gum Arabic Corporation, which is the main company for the export of gum Arabic in Sudan, professes little interest in the resin trade. On the whole, the sum total of Sudan's present frankincense export is difficult to estimate,

mainly because producing countries do not systematically present official trade statistics figures and additionally, most resin gums are not listed individually but rather combined under resins or natural gums (Coppen and Hone 1995; NGARA 2004).

Internationally, resin gum is a valuable commodity because it is a source of essential oils for the cosmetic and pharmaceutical industry (Chikamai 2002; World Bank Group 2007; 2013; CBI 2016b). In addition, resins are used as key ingredients in many perfumes, air freshener, health and aromatherapy products, food, drinks, adhesive, food supplements, soft drinks, food flavouring and other uses (Chikamai and Tchatat n.d.; Tucker 1986).

CONTEMPORARY AROMATIC CULTURE

Frankincense, myrrh, resins and gums are widely used as incense in Sudan and the surrounding countries including the Middle East. In Sudan, frankincense resin was extensively used in medicine, perfumes, makeup, spiritual and cultural ceremonies and many of these are still being practiced today. In present Sudanese culture, aromatics are indispensable components. A variety of resins, gums, cherries and wood are essential ingredients in traditional cosmetics and perfumes, skincare, makeup, medicinal and religious functions and an important ingredient in all cultural and social rituals and traditions.

IN THE HOME AND EVERYDAY USE

For those born and bred in a culture of incense the scent always brings back

memories of home, festivals, events, family gatherings and celebrations. In my family, my mother uses mastic gum to sterilise and at the same time give a pleasant scent to traditional Sudanese coffee cups, water glasses, water jugs, biscuit tins, pickle jars, and she adds it to some soups for a tasty flavour. In every household in Sudan incense is burnt several times a day as an air freshener and fragrance: for instance, first thing in the morning, after cooking, in the early evening or before guests arrive [Fig. 7]. Sandalwood infused with other perfumes is used as a rule. Myrrh and frankincense are mixed with other resins to protect the home and children from the evil eye. Even street sellers of tea and coffee use incense. It is essential during all ceremonies and festivals and



Fig. 7. Everyday use of incense in the home (Photo S. Taha)

gifted to family and friends (based on unpublished interviews with Sudanese people from 2016).

In eastern Sudan, myrrh is the essential coffee “mate” [Fig. 8]. Myrrh is used at home and when meeting friends and neighbours for coffee. In Suakin, the scent of myrrh is very distinctive. Passing through the Souq street (Market Street), one smells straight away the scent of myrrh and the aroma of freshly ground coffee. My interviewees told me that they use myrrh to freshen the air, because in summer the weather can be very humid. They also burn myrrh to keep away mosquitoes and flies. Additionally, they put myrrh in zir (water jars) to purify the water and give it a nice flavour. Myrrh and frankincense are used on special occasions, for example child-birth, weddings, funerals, Al Moulid al Naboiy (the prophet’s birthday) and all



Fig.8. Burning myrrh is an indispensable coffee accessory. Eastern Sudan (Photo S. Taha)



Fig. 9. Sudanese traditional perfumes—continuity of traditions (Photo S. Taha)



Fig. 10. *Jertig* outfit—traditional Sudanese wedding (Photo S. Taha)

religious festivals (based on unpublished interviews made in 2016 with Sudanese respondents from Suakin).

My interviewees recounted that the current source of *luban* myrrh is Darfur and Yemen. I believe this could be due to the heavy drought in eastern Sudan in the 1980s which killed a lot of myrrh and frankincense trees. It could also be the effect of gold mining and mineral exploration.

TRADITIONAL COSMETICS AND PERFUMES

In the traditional wedding ceremony (*Jertig* is a blessing ceremony that has been carried out for centuries), the bride's party and the groom's party customarily visit the river before the ceremony, which is a good omen for fertility and good luck. Incense is burnt throughout the ceremony and traditional perfumes are sprayed around the room and circulated around for the guests to use. Everything is usually in red, that is for protection from the evil eye and to bring luck, fortune and wealth to the newlywed couple [Figs 9, 10].

Khumra

A blend of different aromatic oils and ingredients. First a paste is made from the powdered dried ingredients such as mahaleb cherries (from *Prunus mahaleb*, red wild cherry), cloves, nutmeg, *dufra* ("fingernails-from-the-sea", a term in the Sudanese dialect for onycha, that is, opercula of a mollusk-like snail harvested from the Red Sea) powdered sandalwood, sandalwood oil, musk and Parisian perfumes. This paste is then smoked on a charcoal fire with pieces of sandalwood and local aromatic wood. After smoking, frankincense, myrrh and

various liquid aromatic oils are added to the paste which is then infused with oil to produce the perfume. *Dufra* powder is used in all Sudanese perfumes and cosmetics and must be perfectly cleansed—otherwise it will ruin the perfume—then dried, roasted and powdered.

Bakhoor

Scented sandalwood sliced into small chips and mixed with powdered *Dufra*, powdered sandalwood, sandalwood oil, cloves, Parisian perfumes and a small quantity of sugar. The mixture is cooked over aromatic woods.

Karkar

Scented Sudanese hair cream: is made of oil, clove essences, *dufra*, powdered sandalwood, *mahaleb*, *malhabiya* (sandalwood oil), Parisian perfumes. The mixture is cooked over scented wood (based on the author's interviews with Sudanese respondents carried out in 2017).

Dilka

Traditional scented face and body scrub: the dough is made from sorghum and different amounts of finely ground fragrant substances such as: powdered sandalwood, powdered *mahlab*, *qurunful* (cloves) and *dufra* (onycha) musk and misk. The paste is spread on the inside of a bowl (traditionally wooden), the bowl is then turned upside down and smoked over aromatic wood, which includes *talih* wood (*Acacia seyal* – shittah-tree), shaff (*Terminalia brownii*), and sandalwood. A handful of the powdered fragrant blend is added at regular intervals. Once the paste has cooled, more blends of traditional scents could be added such as

musk, *surratiyya* (cloves oil), *sandaliyya* (sandalwood oil) and *mahaleb* and Parisian perfumes are often added. *Dilka* is used as a body scrub, for body massage and for a soft glowing skin. Also, it is relaxing and soothing.

Dukhan

Sudanese scented smoke bath. A blend of aromatic woods which comprise *shaff*, *talih* (*Acacia seyal*), and sandalwood. They are placed inside a hole, and charcoal is lit to produce scented smoke for a scented steam. Some women use *dukhan* daily for body cleanliness, and it is good for curing physical aches, health, backache and arthritis. Parts used include bark (for fumigation and disinfection) and gum. *Dukhan* is used for a soft, radiant and glowing skin.

Kohl

The main ingredient for making kohl, a traditional eye liner, is *luban* myrrh. It is traditionally smoked over aromatic wood until it turns black. The blackened myrrh is then collected and put in a *mukhala* (kohl cosmetic pot, traditionally made of silver). It is used as an eye liner as an eye treatment.

TRADITIONAL KNOWLEDGE

The making of cosmetics and perfumes are a major part of Sudanese wedding and childbirth rituals. Traditional cosmetics and perfumes are not bought off the shelf readymade, each family makes its own perfumes. Preparations for the wedding perfumes start a few months before the wedding and involve female relatives of the bride and sometimes close friends, who get together to prepare the cosmet-

ics and perfumes. Ingredients, recipe and technique vary slightly from family to family and region to region. Also, wealthy families can afford to use more ingredients and larger quantities of expensive items. The skills are passed on through female members of the family. *Khumra*, *dilka*, *dukhan* and *bakhoor* are used only by married women and brides preparing for their wedding. It is supposed to enhance and to boost sexual fulfilment. Married women use *bakhoor* to smoke their clothes, the bedroom and bedsheets.

MEDICINAL USE

Gum resins were used by many cultures in the past for medicinal purposes. Around the 10th century CE, the physician Ibn Sina wrote about the curative properties of frankincense in healing various diseases, including tumors, vomiting, dysentery and fever (Arberry 1950).

Generally in Sudan, frankincense resin was applied in the past for a range of medicinal, religious and social purposes and these practices are still largely valid today. Myrrh and frankincense resins are used in traditional medicine and for curing various illnesses. For instance, *Luban* myrrh is used in Suakin to cure colds, coughs and stomachache, indigestion, ulcers, inflammation, wounds, arthritis and rheumatism. *Bakhoor* mixed with myrrh is used during the first 40 days after childbirth for treating both mother and baby, purifying the room and protecting mother and baby from infections and other problems.

Gum arabic is used in the rest of Sudan for stomachache, kidney problems, colds, infection, chest infections

and wounds. Sandalwood oil is used for arthritis. The Sudanese scented smoke bath (*dukhan*) is used to cure arthritis and muscle aches. Khol is used to treat eye inflammation and eye soreness. Mastic gum is used for stomachache, ulcers, chewed for mouth hygiene, fresh breath, muscle aches, and bacterial and fungal infections, warmed with sesame seed oil and rubbed on the chest to cure colds. Powdered cloves are used to soothe toothache and reduce pain and discomfort. *Zufra* (Sudanese colloquial *dufra*): is also used for the treatment of inflammation.

Zar ritual

The *zar* ritual is included here with medicinal use because *zar* ceremonies are performed to reduce tension, cleanse the soul and as stress relief. Although *zar* is a widespread ritual, not all Sudanese practise it. *Zar* parties provide women with music, dancing, food and a stress-free atmosphere in which they can feel free to do things which are normally not allowed in everyday life. Resins used during the *zar* ceremony include: *luban Jawi* (frankincense of Java as described by Ibn Batutta, now known as benzoin), *Com-*

miphora pedunculata frankincense, sandalwood, *mastika* (mastic gum), and myrrh (*Commiphora abyssinica*), all blended with traditional Sudanese perfumes (Al Safi 2006). *Zar* rituals have been officially banned in Sudan since 1992, but they continue to be performed covertly.

RELIGIOUS USE

Myrrh and other resins are burnt in mosques, shrines, and burned as offerings or thanksgiving for holy men/women. Frankincense is used for preparing the dead, which is known as *tahmit* (embalming the body; the name seems to be a carryover from antiquity). Commonly, preparing the deceased for burial involves washing, purification, then anointing with sandalwood oil and clove oil and burning sandalwood *bakhoor* (plain, without perfume).

While most of the ingredients are harvested in Sudan, some are imported. For instance, Sudan imports mastic gum, extra myrrh from Yemen, sandalwood, sandalwood oil, cloves, clove oil, from India and South-east Asia (based on the responses of interviewees participating in the ethnographic survey in 2016 and 2017).

SUDAN'S MAJOR ROLE IN THE AROMATICS TRADE AND INTERCULTURAL CONTACTS

Direct archaeological evidence of Sudan's role in linking different regions and continents, both by land and by sea, is very limited. The issue of supplying Ancient Egypt with aromatics has been the subject of a lively debate. A number of scholars have suggested the importance of eastern Sudan in the ancient trade of aromatics

(Maspero 1896; Bloss 1936; Paul 1954/2012; Al Shamiy 1961; Dirar 1981; Kitchen 1993; 2007; 2012). In general, the area's importance has been overlooked for a long time and archaeological work has been very scarce until the recent work of the University of Naples 'L'Orientale', under the direction of Rodolfo Fattovich (1989;

1991b; 1993; Fattovich et al. 1988; Bard and Fattovich 2007; 2013) and Andrea Manzo (2010; 2012a; 2012b; 2014; 2017). The author's ethnographic research corroborates this argument and highlights Sudan's part in the aromatic trade.

Kenneth A. Kitchen (2012: 61) very convincingly points out that "nobody sailed from [Mersa Gawasis] up to 700+ miles non-stop, day and night, to arrive most likely at Trinkitat or Aqiq in record time and in one piece. Within that span of the Red Sea coast, there were (and are) some 60 possible anchorages, usually inlets in which an ancient ship might make an overnight stop". My interviewees related to me that the Red Sea is a difficult sea to navigate, as it is full of dangers, for example, sharks, coral reefs, high winds and storms. Fishermen and sailors need shelter to rest and restock with fresh water. Below are extracts from the interviewees' accounts:

"We know far more islands than the islands on official maps. We know of 100 marsas [bays] and islands from the borders with Egypt to the border with Eritrea and between Sudan, Yemen and Saudi Arabia (MSu 80s)" (Taha 2019).

"Marsa is an anchorage or moorage that is usually at the edge or beginning of the sea, whereas Sharm refers to a bay or inlet boats use as anchorage. An island is usually in the sea, not near the sea coast. In our travels we use corals to avoid the wind and waves; usually, it is a circle or semicircle. It depends on the type of boat and the draught of the boat, if it is big or small, to anchor for protection (MSu 60s)" (Taha 2019).

Sudan has a long coastline on the western Red Sea [Fig. 11]. The distance between the south Red Sea and Egypt is too far to complete without stopping at one of the numerous Sudanese bays and marsas for rest and supply of fresh water. Sailors and fishermen interviewed reported that they used to travel to Yemen, Saudi Arabia, Egypt, Eritrea and Somalia to trade. Contact between the two sides of the Red Sea came to an end in the 1970s. During President Jaafar Nimeiry's military regime of the 1970s, an order was issued that any boats built longer than 12 feet would be confiscated, this in an attempt to constrain smuggling (Taha 2013; 2019). When in Suakin, the author witnessed on several occasions the coastguards stopping Yemeni fishermen along the Sudanese coast. The point made here is that, in the past as in the present, fishermen and sailors travelled between the different harbours along the western and eastern Red Sea coast. For this reason, the author's ethnographic research supports Kitchen's argument.

Archaeological evidence verifies Sudan's—in particular eastern Sudan's—participation in the trade of aromatic resins. The discovery of exotic materials at Mersa/Wadi Gawasis, a Middle Kingdom harbour, and on sites in both the Sudanese Eastern Desert and the Eritrean Sudanese lowlands, enabled archaeologists to substantiate the region's involvement in long-distance association in the 3rd and 2nd millennia BCE (Manzo 2010; 2012a; 2014; 2017). Fattovich, who has written at length on archaeology and the ancient trade structure in the eastern Sudan/Eritrea/Ethiopia area, asserts that "if we overlap the archaeological evidence on



Fig. 11. Countries on the western Red Sea coast and their distance from Egypt (Google Maps | adaptation S. Taha)

some geographical parameters of Eastern Sudan and Northern Ethiopia [i.e., including northern Eritrea] (natural resources, traditional trade routes, main trends of seasonal movements), the general picture we obtain fits quite well to that of Punt in the Egyptian sources" (Fattovich 1991b: 262). He highlights the area's richness in spices, gold, ebony, and ivory, which were among the goods imported from Punt by Egypt and are within the likely traditional seasonal movements from the Gash to the Ethiopian highlands, Red Sea coast and Red Sea hills. As a result of Fattovich's archaeological exploration in the Eritrean-Sudanese lowlands, he quite rightly observed that this region was essential because it had a set of connections and pathways connecting the Nile Valley to the Ethiopian-Eritrean highlands on the one hand and had richness in raw materials which included ebony, aromatics, ivory and gold on the other. Archaeological evidence from Mersa/Wadi Gawasis and the accessibility to a number of raw materials that were imported from Punt by the Egyptians indicates that the region may possibly have been part of the land of Punt (Marks, Mohammed-Ali, and Fattovich 1986; Fattovich 1989; 1991a; 1991b; 1993; 1996; 2007; 2012; Manzo 2010; 2012b; Bonnet and Reinold 1993, cited in Manzo 2012b; Welsby 2001). Availability of exotic raw materials in this region has been suggested by many writers (Al Shamiy 1961; Dirar 1981; and others). Equally, my ethnographic research and the present Beja nomads' seasonal movement support Fattovich's assessment. Furthermore, archaeological evidence also demonstrates that it was very likely that the inhabitants of the region had contact with the Nile Valley

from the 4th millennium BCE through the 2nd. Moreover, the location of the area makes it possible for the inhabitants to act as intermediaries between Egypt, the Eastern regions of the Horn of Africa and southern Arabia (Fattovich 1991b: 260).

Sudan's role as a trade centre connecting national and international regions was well established in antiquity and remained so during the whole of its history to the present. Sudan has been a bridge between inner Africa, central and west Africa, the Horn of Africa, Egypt, the Mediterranean, Arabia, India and the Far East through a network of land and sea routes (Adams 1977; Shinnie 1991; Welsby 1996; Edwards 2004; Morkot 2016; Phillips, Smith, and Taha forthcoming). Land routes have changed very little since the distant past. The same trade routes are used at present by nomads, for instance the *hajj* route from West Africa to Suakin, Darb al-Arbeen from western Sudan to Egypt and the Beja nomads' routes. The main trading centres served as a hub and a meeting point for caravans. For example, caravans came to Shendi from Egypt, Darfur, Kordufan, Sennar, Ethiopia, Morocco, southwest Arabia, through the routes of: Suakin Berber, Suakin Kassala, from Eritrea through Mussawa Kassala, Sennar to Suakin and Toker to Kassala [see Fig. 6]. All of these centres continued to play an important role until the beginning of the 20th century. As my interviewees communicated:

"This changed with the introduction of the railway and the route the British chose killed the caravan trade and the old trading centres. Instead of following existing trade centres and

established networks, the new route created new towns such as Atbara and Port Sudan in place of the traditional trading centres" (Taha 2013; Smith et al. forthcoming).

The Beja nomads were excellent guides and caravan leaders, transporting goods from the ports to the hinterland and *vice versa* (Phillips, Smith, and Taha forthcoming). The role of the old centres slowly diminished.

Throughout Sudanese history hinterlands had strong relationships with port cities and have played a vital role towards trade networks. Neither port cities nor hinterlands could have functioned without the other. Badi was served by its hinterlands as reported by Hiroshi Nawata (1997), and Akik according to Crowfoot (1911), Ayzab (Al Shamiy 1961; Dirar 1981) and Suakin (Taha 2013; Phillips, Smith, and Taha forthcoming). W. Rhoads Murphy (1989: 232) accurately expressed this relationship: "a port requires good access to hinterland even more than to the sea-linked foreland". And on a similar note Janet Starkey (2005) observed that ports along the Red Sea coast, although distant from their hinterlands, were as dependent on them as on their sea lanes. Al-Maqrīzī (1948) affirms the existence of a route connecting the Nile with Suakin, Badih, Dahlak and other ports along the Red Sea, and also cites the route along the Nile from Abu Hamad to Al-Debba, shortened by crossing the Bayuda desert.

The Sudanese Red Sea coast was greener and lush (Hjort af Ornäs and Dahl 1991: 17). The authors asserted that 2000 years ago the region had more vegetation and plentiful wildlife and that

ariel, ibex, wild sheep, gazelle, hares, and dikdik were recorded and seen around the mountains as late as the 20th century. Moreover, a variety of large animals, including oryx and wild boars, thrived in the *khors* (watercourse). Elephants used to be seen in Khor Braka, and oral history speaks about giraffe hunting. My interviewees concurred; in their accounts the area used to be much greener and there was enough pasture for their animals. They complained that now they need to supplement by purchasing some animal feed. I believe this is due to the rapid residential, infrastructure and agricultural expansion, the building of the Atbara dam and the resettlement of the Nubians displaced as a result of the building of the Aswan High Dam. All these factors have put considerable pressure on available grazing land.

Eastern Sudan has comparable climatic conditions, environment, vegetation, fauna and flora, and geographic characteristics to those of Ethiopia and Eritrea. Until recently, myrrh used to be harvested from the region. Eastern Sudan is very rich in gold and raw materials, items desired by the ancient Egyptians. For that reason, the region was exploited by Egyptians, Greeks, Romans and Arabs. All this demonstrates that Sudan was a vital region for trade and intercultural contact. All exports from Africa by land or sea had to pass through Sudan or the Nile before they reached Egypt or Arabia. My ethnographic research and the contemporary Sudanese aromatic culture illustrates that the use of aromatic gums is part of everyday life. Archaeological, geographical, historical and literary evidence endorse the role of Sudan as a major provider of aromatic trade in

the past and the present. I suggest that Sudan, with its aromatic resources, land routes that criss-cross the country, as well as the Nile water route, was one of the major players in the supply and production of incense. I argue that Punt is not a country but rather a geographical region (as we say the Gulf States, Mediterranean countries and so on). In my opinion one country would not have been able to satisfy the whole demand for aromatics. For

that reason, Punt could possibly include the area of eastern Sudan, Ethiopia, Eritrea, and possibly even Somali, Djibouti and Yemen as well. The Sudanese Red Sea coast provides excellent clues and missing pieces of the jigsaw puzzle. The area was active and was not in a state of hibernation. It was a producer, and active in the trade and supply of aromatics as well as other raw materials both to the Kushites and to Egypt.

CONCLUDING REMARKS

Contemporary Sudanese aromatic culture confirms Sudanese knowledge and use of aromatic resins for cosmetics and perfumes, medicinal, religious, cultural and social purposes. The use of incense in Sudan is long-lasting and embedded in traditions, rituals and practices. Knowledge has been passed on across generations from antiquity to the present. Archaeological evidence substantiates the use of aromatic gums through time. The research exemplifies that frankincense and aromatics are an indivisible part of everyday life in every Sudanese household, rooted in social and cultural traditions. Incense was and still is an important commodity, part of everyday use and a source of income.

My own experience and my ethnographic research illustrate that Sudan remains one of the main providers of aromatics. It is therefore not surprising to find that present day culture in Sudan still includes the use of aromatics in all its important cultural and spiritual ceremonies. Looking at the aromatic culture of Sudan gives us a very good indication of the role that aromatics once played

in its spiritual and cultural history. My ethnographic investigation complements and confirms recent archaeological evidence, Kitchen's analysis and other scholars' interpretations. The study highlights Sudan's significant input to the incense and frankincense trade in both past and present. Sudan did not play a passive role in the distant past, but rather an influential role in the production, supply and transport of incense and other exotic raw materials. Moreover, Sudan's strategic geographical position has served as a passage for people, trade, and ideas since time immemorial. The research suggests that there is a need to reconsider the part played by this region in the ancient trade of incense.

The role of the Beja nomads should be emphasized. Their contribution to the movement of goods from and to the Red Sea ports, the Nile valley and the hinterlands and across borders is immeasurable. It would hardly have been possible without their vast network of trading routes and intimate knowledge of the landscape and environment. Likewise, let us not forget the role of the successive

kingdoms which ruled what is now Sudan, in organising, managing, coordinating and administering a very successful stable and secure transport, collection and distribution system. Both the Beja and the kingdoms supported trade networks which connected three continents: Africa with the Mediterranean through Egypt, and South Arabia, India, the Far East through the Red Sea.

Gold mines attracted several occupiers and invaders to eastern Sudan in the past and are still a rich source of gold and other minerals. Currently, the region is

like the Wild West, there is a frenzied rush for gold. The government gave concessions to mining companies, which will undoubtedly pose a major threat to and destruction of archaeological evidence. Other equally damaging threats are the proposed dam construction projects on the Atbara and Setit rivers and agricultural, residential and infrastructure developments and land grabs (a term for the buying and leasing of land in Africa by the Gulf States). This area will provide significant evidence of the incense trade and routes to the Nile Valley, Egypt and beyond.

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