CHINESE FOREIGN AROMATICS IMPORTATION FROM THE 2ND CENTURY BCE TO THE 10TH CENTURY CE

Research Thesis

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by

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Introduction

Trade served as a major form of communication between ancient civilizations. Goods as well as religions, art, technology and all kinds of knowledge were exchanged throughout trade routes. Chinese scholars traditionally attribute the beginning of foreign trade in China to Zhang Qian, the greatest second century Chinese diplomat who gave China access to Central Asia and the world. Trade routes on land between China and the West, later known as the Silk Road, have remained a popular topic among historians ever since. In recent years, new archaeological evidences show that merchants in Southern China started to trade with foreign countries through sea routes long before Zhang Qian's mission, which raises scholars' interests in Maritime Silk Road.

Whether doing research on land trade or on maritime trade, few scholars concentrate on the role of imported aromatics in Chinese trade, which can be explained by several reasons. First, unlike porcelains or jewelry, aromatics are not durable. They were typically consumed by being burned or used in medicine, perfume, cooking, etc. They might have been buried in tombs, but as organic matters they are hard to preserve. Lack of physical evidence not only leads scholars to generally ignore aromatics, but also makes it difficult for those who want to do further research.

Secondly, study of aromatics requires high language skills. In most cases, Chinese people named aromatics by transcribing their foreign names. To identify what aromatic the name refers to exactly, we have to trace back to its original language. In the case of Chinese aromatics trade, researchers are expected to have knowledge of ancient Chinese, Sanskrit, Arabic and Persian that were used by merchants in the past. Fortunately, we have language masters like Berthold Laufer and Edward Hetzel Schafer, whose works contribute greatly to this field; however, their works are not flawless. Their knowledge of mandarin does not promise a perfect understanding of ancient Chinese, which is different in grammar and meaning. Also, the primary sources they use are usually quotations from much latter compiled works. For example, while analyzing importation of

foreign plants during the Tang dynasty, Schafer depends greatly on quotations of Tang texts made by the sixteenth century herbalist Li Shizhen in his *Bencao Gangmu* (Compendium of Materia Medica). This is understandable since the original copies of many primary sources did not survive. Using quotations can be problematic, however, because ancient Chinese writers often commented on their quotations with a changing contemporary understanding, which leaves a biased impression on readers' mind. Also, Chinese writers did not always quote word by word. The same account quoted in a Ming dynasty journal may vary from that quoted in a Song dynasty journal, and even relatively minor differences are enough to change the meaning of the original passage.

Thirdly, aromatics are closely related to senses, and records of them can be very subjective. It is hard for non-Chinese scholars who are not familiar with Chinese aesthetic to understand those descriptions. Even among Chinese scholars, few have experience working with aromatics. Since the names applied to aromatics do not always represent the same species, in order to analyze what plant a name represents, we have to compare the written record with physical materials.[1]

This paper aims to show that foreign aromatics were important commodities in Chinese foreign trade, and the size of importation keeps growing. The paper intends to research on the development of Chinese foreign aromatics importation from the second century BCE to the tenth century CE, which was greatly influenced by imperial governments' policies and the spread of Buddhism. The research is based on recent archaeological evidence, an enlarged selection of Chinese texts and some Indian, Arabian and Greek texts. The research also uses knowledge of aromatics from Chinese traditional incense making, which helps to better explain ancient Chinese accounts of foreign aromatics, and corrects mistakes made by modern scholars.[2] The paper is divided into two

[1] According to my knowledge, both Chinese and non-Chinese scholars have turn to Japanese *kōdō* (way of Fragrance) masters for advice. Chinese culture and Japanese culture share as many similarities as their differences. It is not wise to completely use their explanations.
[2] I have been practicing Chinese traditional incense making for five years before I study history at The Ohio State University.

parts. The first part is an overall survey of Chinese aromatic importation and usage during this period, including trading routes, nations, merchants, etc. The second part is a detailed description of major aromatics imported to China that includes an analysis of the names of aromatics, their regions of origin, how they were brought to China, their usage and influences to Chinese society.

I. Chinese Aromatics Importation

Although archaeological evidence shows that overland trade between China and Xinjiang began in the Shang Dynasty (1766~1045 BCE), and China might have indirect contact with India and the Mediterranean world through Central Asia since then, by far there is no evidence that foreign aromatics were brought to China at the time.[3] Aromatics recorded in pre-Han texts were all local plants, such as cassia and Szechuan pepper.[4] Chinese importation of foreign aromatics might begin no earlier than West Han dynasty through maritime trade. Maritime aromatics importation kept flourishing ever since, and became a regional advantage of Southern China. Over land trade brought in aromatics too, but in a smaller scale. It was temporarily dimmed at the end of Han dynasty, then revived during the Six Dynasties, and flourished in the Sui and Tang dynasties. Expansion of trade was related to three factors: governmental promotion, growth of Buddhism in China and socioeconomic revival. As a result, new routes were established; more and more nations in South East Asia and Central Asia started to trade with China; new merchant communities and foreign aromatics entered China, constantly updating Chinese people's knowledge of aromatics and the outer world. The following survey is going to discuss how those factors affected the

[3] Valerie Hansen, *The Silk Road: A New History with Documents*, (New York: Oxford University Press, 2017), 12.
[4] Dong Chuping, *Chu Ci Yi Zhu* (Translation and Commentary of Verse of Chu), (Shanghai: Shanghai Gu ji Chu ban she, 2006), 8.

development of Chinese foreign aromatics importation in each imperial period (Han dynasty, the Six Dynasties, and Sui and Tang Dynasties).

Han Dynasty (202 B.C.E ~ 220 C.E.)

Archaeological evidence suggests that Southern China began to import foreign aromatics through maritime trade in the second century BCE. A small lacquer case of frankincense is found in the tomb of Zhao Mei, who was the second king of Nanyue in early West Han Dynasty; in Mawangdui, another tomb from the same century in central China, only native herbs and aromatics were found.[5] Nanyue was a small kingdom in the third and second centuries B.C.E. located in Northern Vietnam and Southern China, including modern regions of Guangdong, Guangxi and Yunnan. Its capital Fanyu, which is now Guangzhou, became China's official port for a direct trade with nations in South East Asia after Emperor Wudi of Han conquered it.[6] A new explanation of *Shiji*'s account of Fanyu suggests that among those imported exotics was camphor.[7] Also found in the tomb of king of Nanyue is a delicate bronze incense burner. Its burning bowl is separated into four sections, meaning it can burn four kinds of aromatics at the same time. This suggests that diverse kinds of aromatics were available in the kingdom, and the royal family of Nanyue was a big consumer of them. It also indicates that people in Nanyue had a basic sense of mixing

[5] Guangzhou Shi wen wu guan li wei yuan hui, Zhongguo she hui ke xue yuan, and Guangdong Sheng bo wu guan, *Xi Han Nanyue wang mu* (Tomb of King of Nanyue in Han Dynasty), (Beijing: Wen wu chu ban she, 1991), 141; Chen Dong-Jie and Li Ya, "Interpreting the Customs of Using Spice in the Han Dynasty from the Spice and Its Containers Unearthed from Tomb No. 1 of the Han Dynasty at Ma Wang Dui," *Academic Forum of Nandu (Journal of the Humanities and Social Sciences)* 29, no.1 (2009), 6-8.

[6] Guangzhou Shi wen wu guan li wei yuan hui and Guangzhou Shi Bo Wu Guan, *Guangzhou Han Mu* (Han Tombs in Guangzhou) (Beijing: Wen wu chu ban she, 1981), 476.

[7] Han Huaizhun claims that *guobu* mentioned in *Shiji* should not be translated separately as *guo* (fruit) and *bu* (textile), but should be considered as a transcription of Malaysian word *kapur*, which means camphor. Han Huaizhun, "Long Nao Hsiang Kao" (Research on Longnao Hsiang), *Journal of South Seas Society* 2, no.1 (1941), quoted in Sun Ji, *Handai Wuzhi Wenhua* (Material Culture of Han Dynasty), (Beijing: Wenwu Chubanshe, 1991, 361

ingredients together to get a better aroma, but they might lack of knowledge to make compound incense.

Plate I. Bronze incense burner, from the tomb of king of Nanyue

The maritime trading route between Southern China and South East Asia was recorded in the first century official chronicle *Hanshu*, implying the Chinese government paid attention to overseas trade.[8] Scholars have taken great efforts to identify the places mentioned in that route, but some of them still remain unidentified.[9] In general, this route started from Southern China, passing present day Vietnam, Malay Peninsula, Thailand, Myanmar, and finally arrived in Southern India and Sri Lanka. Many of them were known for producing aromatics throughout the

[8] Ban Gu, *Han Shu* [Book of Han], (Beijing: Zhonghua Shuju, 1962), 28b:1670

[9] Scholars have come to a conclusion on following names: 日南障塞 (now Quảng Trị, Vietnam), 徐闻 (Xuwen,Guangdong), 合浦 (Hepu,Guangxi), 夫甘都卢国 (Pagan,Myanmar), 黄支(Canjeeveram, India). About 已程不国, Zhang Xinglang thought it was Ethiopia, which is less possible. Most scholars today consider it as Sri Lanka. Liu Yingsheng, *Si Chou Zhi Lu* [The Silk Road], (Nanjing: Jiangsu Renmin Chubanshe, 2014), 344； Zhang Xun, *Wo Guo Gu Dai Hai Shang Jiao Tong* (Chinese Ancient Maritime Transportation), (Beijing: Shangwu Yin Shu Guan, 1986), 14； Zhang Xinglang, *Zhong Xi Jiao Tong Shi Liao Hui Bian,* (Beijing: Zhong hua shu ju, 2003), 1854-55.

ancient world. India also attracted Greek and Roman traders coming with Arabian and African treasures. Possibly frankincense came to Nanyu*e* through this process. The Han government made an unsuccessful attempt to open another sea route in 97 CE, planning to directly contact the Roman Empire. Chinese envoys were warned by Parthian merchants about the danger of sea voyage, and then gave up their plan.[10] The Han court made no further efforts after this failure, which made maritime trade a regional advantage of Southern China.

Aromatics were also imported to China through land routes, but the importation was temporarily dimmed at the end of the second century CE due to civil wars. With efforts of Zhang Qian and Ban Chao, by the first century CE, Han dynasty secured its control over Gansu corridor and Dunhuang, thus revived and enlarged trade with the West Region.[11] China had no direct contact with the Mediterranean world, but they knew Persia and India had.[12] Archaeological evidences show that frankincense was imported through land route in West Han.[13] *Storax*, for example, was recorded by Han scholars as a product of the Roman Empire. Han officials also gave order to exchange silk with storax and horses.[14] According to a Han *Yuefu* (poems composed in a folk song style), foreign merchants came to China with rosemary and other overseas aromatics.[15] Rosemary, a Mediterranean herb, known as *midie* in Chinese, was also considered from the Roman Empire, and was popular among Han scholars-officials.[16] But constant warfare at the end of East Han resulted in social instability and economic crisis. Cao Cao, the Chancellor and *de facto* ruler

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[10] Fan Ye, *Hou Han Shu* [Book of the Later Han], (Beijing: Zhong hua shu ju, 1965), 88:2918
[11] Hansen, *The Silk Road*, 14.
[12] Fan Ye, *Hou Han Shu,* 88:2918.
[13] Zhang Xiancheng, "The Annotated Research on "Xun du", "Xun li" As Seen in Excavation of the Remains of Western Han dynasty," *Chinese Journal of Medical History* no.4 (2001): 207-209.
[14] Ban Gu, *Yu Di Chao Shu* (A Letter to Brother Chao), quoted in Sun Ji, *Han Dai Wu Zhi Wen Hua* (Material Culture of Han Dynasty), (Beijing: Wen wu Chu ban she, 1991), 360.
[15] "行胡从何方？列国持何来？氍毹、毾㲪（？）、五木香，迷迭、艾纳及都梁." Ibid, 360.
[16] Yu Huan, *Wei Lue*, quoted in *Tai Ping Yu Lan*, ed. Li Fang et al (Shanghai: Shanghai gu ji chu ban she, 2008), 982:650.

of East Han in second and third centuries, even released an order prohibiting the usage of incense, in order to promote a simple modest living style and revive the economy.[17]

Thus, aromatic importation in Han dynasty depended mainly on maritime trade. Almost all of the aromatics used in a Han court incense recipe came from maritime trade, such as agarwood, cloves and camphor.[18] Cloves were also used by Han officials as a breath freshener. Chewing cloves before entering the court became an officials' discipline commanded by the Emperor, and to fulfil it requires a stable and adequate supply of clove.[19] This implies sufficient commercial activities between China and South-east Asia by sea at the time. Imported aromatics through sea routes rather than land routes is understandable. First, many important aromatics production districts distributed along the seashore of South East Asian islands, which makes it more convenient to ship to Southern China. Secondly, traveling on land not only took much longer time than traveling by sea, but also required merchants to deal with high temperature and dry climate, which will reduce scent of aromatics and make them less valuable. Thirdly, while overland trade was interrupted by central China's warfare, maritime trade in Southern China was less affected. After Battle of Red Cliffs in 208-209 CE, Southern China remained a state of autonomy, and was free from Cao Cao's regulation.

To summarize, the Han dynasty initially encouraged foreign aromatic importation, but later regulated the importation due to unstable socio-economic conditions. Maritime trade was more secure than overland trade, and was the major method of importation. Although Buddhism was

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[17] Cao Cao, *Wei Wu Ling* (Order of Emperor Wu of Wei), quoted in *Tai Ping Yu Lan*, 981:642.
[18] Agarwood, or aloeswood, known to Chinese as 沉香 (chen hsiang), is the decayed fragrant heartwood of several species from the *Aquilaria* family, which is native to Southeast Asia. Agarwood is valued by Chinese, Japanese and Arabians; *Han Gong Xiang Fang Zhen Zhu* (Zhen's Commentary on an Incense Recipe of Han Court), quoted in Zhang Bangji, *Mo Zhuang Man Lu*, chapter 2, https://zh.wikisource.org/wiki/墨莊漫録/卷二.
[19] Ying Shao, *Han Guan Yi* (Principles of Han Officials), 2:194, https://ctext.org/wiki.pl?if=gb&chapter=718541&remap=gb#p145

brought to China during this period, it was still a minor religion and had no significant influence on aromatic importation. Aromatics imported during this period included camphor, agarwood, clove, frankincense, storax, and rosemary. We have very limited knowledge about foreign merchants that involved in the aromatic trade during Han dynasty. Their identity was obscure, usually called by Chinese people as *hu* people, might be Central Asia communities. Judging from the names of aromatics, Indian merchants played an important role in the maritime trade, which will be further discussed in the second part of this paper.

The Six Dynasties (220~589 C.E)

During this period, Chinese aromatics importation grew drastically. One reason is that people no longer lived in the modest style that Cao Cao required. Their desire for exotic goods increased. Even Cao Cao's son Cao Pi (ca. 187-226 C.E), the first emperor of Cao Wei, sent envoy to the Eastern Wu, asking for nutgrass (*Cyperus rotundus*).[20] Another reason is the rapid spread of Buddhism in China. Major aromatics used by Buddhist monks such as sandalwood, camphor, saffron or costus, frankincense are indigenous to foreign lands. Therefore, in order to practice Buddhist rituals, newly converted Chinese Buddhists had to import aromatics from overseas.

Driven by these needs, scale of foreign trade through both land and sea routes expanded greatly under governmental promotion. Guangzhou now replaced Hepu and Xuwen as start of sea trading route, which makes sailing safer and shipments to other parts of China much easier.[21] Eastern Wu (222-280 C.E.) frequently sent envoys Zhu Ying and Kang Tai to visit South East Asian nations. Both of them came back and wrote journals about local culture and specialties, which largely expanded Chinese's knowledge of Southeast Asia. In 232 A.D. Sun Quan, ruler of Eastern Wu

[20] Yu Pu, *Jiang Biao Zhuan*, quoted in *Tai Ping Yu Lan*, 981:644.
[21] Zhang Changyan and Yan Hao, *"*Wei Jin Nan Bei Chao de Hai Shang Si Chou Zhi Lu Ji Dui Wai Maoyi de Fazhan" (Development of Maritime Silk Road and Foreign Trade during the Six Dynasties), *Cangsang* no.5 (2008), 19.

sent ships fully loaded with goods on an official trade expedition across the sea.[22] Later dynasties such as Liu Song, Southern Liang all encourage maritime trade. In 446, Emperor Wen of Liu Song defeated Linyi (Southeast Vietnam), which helps secure the trade route.[23] In response to that is an increase of tribute including aromatics sent by those nations to Southern Dynasties. Among those nations were Tianzhu (India), Linyi (Southeast Vietnam), Funan (Cambodia), Panpan (Southern Thailand), DanDan (Malay Peninsula), Poli (Bali), Gantuoli (Kedah).[24] Unfortunately, it was not clear what aromatics each of them specifically offered since their tribute was usually recorded as "various aromatics" or "aromatics and medicines, " but it was likely to be their local specialties.[25]

Northern dynasties, located in central China, started to revive and promote foreign overland trade. Cang Ci, the Administrator of Dunhuang Commandery in the third century, was respected by foreigners because he protected foreign merchants from being oppressed by local lords and nobles, and those who wanted to do business in Luoyang would be safeguarded by Chinese soldiers en route. [26] In 435 CE. and 436 CE. Emperor Taiwu of Northern Wei (408-452 C.E.) sent envoys to nations of the West Region. Then, starting in 437 C.E. waves of envoys from various nations in Central Asia came to visit China.[27] Policy of Northern Wei was very trade-friendly, which attracted a large number of foreign merchants to come and trade.[28]

As a result of busy commerce and diplomat activities, Chinese's knowledge of aromatics expanded greatly. New kinds of aromatics appeared in historical texts. Some of them can be

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[22] Zhang Xun, 17.
[23] Li Yanshou, *Nan Shi* [History of the Southern Dynasties], (Beijing: Zhonghua Shuju, 1975), 79:1981
[24] Zhang Xun, 32-33.
[25] Wang, Qinruo et al, *Ce Fu Yuan Gui: Jiao Ding Ben*, (Nanjing: Fenghuang Chubanshe, 2006), 968: 11208-11214, 969: 11217
[26] Chen Shou, *San Guo Zhi* [Records of the Three Kingdoms], (Beijing: Zhonghua Shuju, 1962), 16:512-513.
[27] Wei Shou, *Wei Shu* [Book of Wei], (Beijing: Zhonghua Shuju, 1974), 4a:85.
[28] "不设科禁，买卖任情，贩贵易贱，错居混杂." Wei Shou, *Wei Shu*, 60:1341.

identified with little doubt, such as saffron, pepper, sandalwood, long pepper; others remain questionable, such as *anxi hsiang*, *douna hsiang*, and *aina hsiang*. Those that had already been imported to China since Han Dynasty, such as frankincense, camphor and clove, were updated with more information regarding their origins and characteristics. When recording origins, however, Chinese scholars and chroniclers occasionally confused entrepots with origins. The third century historical text *Wei lue* recorded that Da Qin (the Roman Empire) produced twelve kind of aromatics, including storax, saffron and frankincense.[29] The *Wei Shu* mentioned that Persia produced "aromatics such as frankincense, saffron, storax…; things such as pepper, long pepper…nutgrass…"[30] Frankincense is indigenous to Arabia, while pepper is indigenous to South India. They were merely brought to Roman Empire and Persia by merchants. Historical texts from Southern Dynasties are more accurate, probably because Southern Dynasties had direct trade with regions of origins. Also, Southern Dynasties' envoys loved to write journals about foreign countries, probably out of a sense of responsibility as scholars and by ruler's command. Both Zhu Ying and Kang Tai wrote journals after they came back. Zhu Ying's work was completely lost, but some pieces of Kang Tai's *Wu Shi Wai Guo Zhuan* (Records of Foreign Countries during Wu's time) was quoted in several works. A third group of accounts was written by Chinese Buddhist monk-travelers, such as Fa Xian's *Record of Buddhistic Kingdoms*. Further discussion on accounts of aromatics can be seen in the second part of this paper.

The Sui and Tang Dynasties (581~907 C.E.)

During the Sui and Tang dynasties, Chinese aromatics importation continued to grow. The Sui and Tang emperors promoted foreign trade through military forces and transportation development.

[29] Yu Huan, *Wei Lue*, quoted in Chen Shou, *San Guo Zhi,* 30: 858-859.
[30] Wei Shou, *Wei Shu*, 102:2270-2271.

During its short reign, the Sui dynasty defeated Tuyuhun and Linyi in 607 CE, which helped to secure both land route and sea route.[32] The Tang dynasty not only fought against its hostile neighbors such as Gaochang and Tibet, but also set up six protectorates to protect its boundary and trade routes.[34] Also, foreign trade routes developed rapidly during this period. As a result, Tang dynasty had four land routes and four sea routes, making it much easier to travel to other countries.[35] Tang's power attracted envoys coming from both West Region and South Sea, many brought aromatics as tribute. For example, in 749 C.E. Linyi offered 30 *jin* (about 680 grams) of agarwood to Tang dynasty.[36]

It should be mentioned that in 651 C.E. Rashidun Caliphate sent envoys to China, which means China then had a direct contact with the origin of frankincense.[37] The protection and convenience offered by Tang Dynasty promoted the scale of trade up to a new level. Caravans were able to come to Western China with larger amounts of aromatics, resulting in a greater aromatics consumption, which in return increased people's demand of more aromatics. According to a Gaochang business record excavated in Turpan, aromatics were sold by *jin* (about 1.5 pounds). A Gaoche merchant names Di Saban even sold 572 *jin* of aromatics, which equals about 380 kilograms.[38] Aromatics were no longer exclusive luxuries enjoyed by the powerful and rich

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[32] Tuyuhun was a kingdom located in today's Qinghai Province in China.
Wei Zhen, *Sui Shu* [Book of Sui], (Beijing: Zhonghua Shuju, 1997), 67:1577-1583; Ibid, 82:1831-1833.
[34] Gaochang was an oasis city located in Xinjiang, China, north of Taklamakan Desert.
[35] For more details about Tang's trading routes, see Liu Xiwei, *Sui Tang Jiao Tong* (Transportation in Sui and Tang dynasties), (Taipei: Xin wen feng chu ban she, 1992), 116-148.
[36] Wang, Qinruo et al, *Ce Fu Yuan Gui: Jiao Ding Ben*, 971:11241.
[37] Ibid, 970:11232.
[38] Tang Changru, *Tulufan Chu Tu Wen Shu* (Texts excavation in Tulufan), (Beijing: Wen wu chubanshe, 1992), vol.3, 318, quoted in Jiang Boqin, *Dunhuang Tulufan Wen Shu yu Si Chou Zhi Lu* (Texts from Dunhuang and Tulufan and the Silk Road), (Beijing: Wenwu Chubanshe, 1994), 138-139

minorities. They started to be widely used in different aspects, such as in religious rituals and in people's daily life.

The prosperity of Buddhism in Tang Dynasty resulted in a large demand of foreign aromatics. The Buddhist monks consumed aromatics extravagantly. They believed that aromatics had the power to clean human beings both physically and mentally, so they often boiled water with various kinds of aromatics and bath themselves. Dunhuang manuscript S. 2575 shows that bathing in fragrant water is part of Dunhuang Buddhist monks' daily routine.[39] Fragrant water made from aromatics such as sandalwood, frankincense, cloves were also used to anoint and bath Buddhist statues, which was considered as the best piety action. [40] Besides, aromatics were burned or offered as tribute in Buddhist temples. Six ninth century incense burners along with incense cases and tools were excavated from the underground palace of Famen Temple.[41] Also founded in the underground palace are eleven pieces of decorated fragrant wood, weighed 1701.3 grams in total. The original item list recorded them as "two pieces of frankincense mountain, weigh three *jin* (2040 grams); two pieces of sandalwood mountain, weigh five *jin* and two *liang* (3485 grams); two pieces of clove mountain, weigh one *jin* and two *liang* (765 grams) and two pieces of agarwood mountain, weigh four *jin* and two *liang* (2805 grams)."[42] Variation in number and weight may be caused by poor conservation, but we have no clue why they were named like this. Because aromatics were valued so much in Buddhism, occasionally they were brought back to China by Chinese monk-travelers as gifts.[43]

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[39] Ibid, 133.
[40] *Yu Fo Gong De jing,* tans. Yi-ting, https://zh.wikisource.org/zh/浴佛功德經
[41] Ran Wanli, "Tang Dai Jin Shu Xiang Lu Yan Jiu (Research of Tang's Metal Incense Burners)," *Wenbo* no.2 (2000), 15.
[42] Dong Shuyan, "Tang Song Shi Qi de Xiang Ju he Fo Shi (Incense objects and Buddhism in Tang and Song Dynasties)," in *Xiang Yuan Yi Qing: Tang Song Xiang Ju Lan Cui*, ed. Dong Shuyan and Li Shuxin, (Beijing: Zhong guo shu dian, 2015), 13
[43] Wang Weibang, *Da Tang Xi Yu Qiu Fa Gao Seng Zhuan Jiao Zhu* [Buddhist Pilgrim Monks of Tang Dynasty], (Beijing: Zhonghua Shuju, 1988), 11.

Plate II. Decorated fragrant wood excavated from the underground palace of Famen Temple (Dong, Shuyan, 9)

The Tang dynasty's stable and flourishing society encouraged a big demand of aromatics. Aromatics were used in culinary, perfuming body and clothes, cosmetics, incense making, medicine, architecture, etc. Both text and archaeological evidences demonstrate the lavish usage of aromatics by different classes of people. Wine flavored by *yujin* was praised by Tang poets.[44] Several recipes of "Incense for Perfuming Clothes" and face cream are found in Dunhuang Manuscripts, consisting of foreign aromatics like sandalwood, agarwood, spikenard, frankincense and clove.[45] More recipes of incense and cosmetics are recorded in *Wai Tai Mi Yao*, an edition of medical recipes written by Wang Dao in 752 C.E. Among them are three recipes for making lip balm, in which various kinds of aromatics were used abundantly.[46] Emperors of Tang used to give lip balm and face cream as gifts to their officials on the Laba Festival (the eighth day of the twelfth

[44] "兰陵美酒郁金香，玉碗盛来琥珀光." Li Bai, *Li Tai Bai Wen Ji* (Literary works of Libai), (Taipei: Shang wu yin shu guan), 20:2.
[45] Dunhuang Manuscripts S. 4329, quoted in Jiang, 133-136.
[46] Wang Dao, *Wai Tai Mi Yao Juan* 32, https://ctext.org/wiki.pl?if=gb&chapter=980102&remap=gb

month of Chinese lunar calendar) every year, suggesting such perfumed cosmetics were necessity for winter.[47] Incense burners and silver sachets were frequently excavated from Tang tombs, also indicating the popularity of aromatic usage during this time.[48]

In Tang Dynasty, aromatics were brought to China by various groups of merchants. The previous quoted Gaochang business record shows that Sogdians, Gaochang, Jushi and Indian merchants were doing aromatic trade in Gaochang Kingdom.[49] The Sogdian aromatics engaged in musk trade no later than the fourth century CE according to *Ancient Letters IV and V* excavated in Dunhuang.[50] Mention of camphor and pepper in the letters shows they have contact with India, probably Gandhara, which had a very flourishing aromatic market at the time, but as Laufer suggests they may have contact with regions of origin in Southeast Asia.[51] In 689 CE, the guild of aromatic merchants in Luoyang dedicated cave 1410 of Longmen: the president, secretary and three other members of the guild all bore Sogdian names, fully demonstrating the power of wealth of Sogdian aromatic traders in Tang dynasty.[52] The maritime trade was dominated by Indian, Persian and Southeast Asian merchants. During his voyage to Japan, Jianzhen (688-763 CE) remembered seeing countless Indian, Persian and Malay ships loaded with mountains of aromatics and treasures.[53] Persians were prominent aromatics merchants. *Jiu Tang Shu* records a great Persian merchant named Susha Li tributed 450 *jin* (306 kilograms) of agarwood as building

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[47] Chen Yuanliang, *Sui Shi Guang Ji*
38，https://ctext.org/wiki.pl?if=gb&chapter=707497&remap=gb#p93
[48] Wang Yingzhu, "Lue Lun Qin Han zhi Liang Song Shi Qi de Xiang Liao (Survey of aromatics from Qin and Han dynasties to Song dynasty), *Wenwu* no.5 (2013), 73.
[49] Jiang Boqin, 140.
[50] Etienme de la Vaissiere, *Sogdian Traders: A History*, trans. James Ward, (Leiden: Brill, 2005), 45.
[51] Laufer, 1919, 374-5, quoted in Vaissiere, *Sogdian Traders*, 51.
[52] Vaissiere, *Sogdian Traders*, 141.
[53] Zhang Yi, Zhang Yichun, Hyech'o, and Huan Du, *Wang Wu Tian Zhu Guo Zhuan Jian Shi*. (Beijing: Zhonghua Shuju, 2000), 106.

material to the emperor, which worth a huge amount of money.[54] Arabians were also experienced aromatic merchants. They recorded in detail what kind of aromatics could be purchased at which port. For example, ibn Khordadbeh (820-912 CE) mentioned that "from al-Sind, costus, qana and al-khayzuran are imported. Mulay has black pepper and qana. Samundar has rice, and aloeswood is brought here from a distance of fifteen to twenty day's journey by means of a river from Kamrun (Kamarub) and other places."[55] The nineth century writer Abū Zayd al-Sīrāfī mentioned that "Khanfu (Guangzhou) is the meeting place of the merchants," but he also said most of Chinese boats loaded in Siraf.[56] It seems like Arabian merchants can choose to sail either halfway at Siraf, or the whole way down to Guangzhou to trade with Chinese merchants.

II. Foreign Aromatics

The second part of this paper is going to discuss several major aromatics that were brought to China during this period. The main goal of this part is identification. During this period, Chinese texts usually do not include images, which makes it hard to identify the aromatics. To make things worse, many records written before Tang dynasty are very simple, sometimes include only name and region of origin. Origin can be misleading, because Chinese writers were unable to distinguish between entrepots and regions of origin; but name is helpful, since it was usually transcribed from foreign languages. Therefore, by tracing back to its original form (Sanskrit, Persian, etc.), we will find a possible aromatic that the Chinese name may refer to. After compared details of the Chinese records, such as color and usage, with Indian, Greek and Arabian texts, and my knowledge of the possible aromatic, a conclusion can be made whether the name in the Chinese record actually refer

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[54] Liu Xu, *Jiu Tang Shu* [Old Book of Tang], (Beijing: Zhonghua Shuju, 1975), 17a:512.
[55] ibn Khordadbeh, "Kitāb al-Masālik w'al- Mamālik," in *Arabic Classical Accounts of India & China*, ed. S. Maqeul Ahmad (Shimla: Indian Institute of Advanced Study, 1989), 4-10
[56] Abū Zayd al-Sīrāfī, "Accounts of China and India," in *Arabic Classical Accounts of India & China*, ed. S. Maqeul Ahmad, 37-38

to that aromatic. This also helps to analyze the aromatic's carriers and imported route. The selected aromatics: *xunlu* (frankincense), *anxi hsiang* (gum guggul)*, yujin hsiang* (saffron/costus), *longnao hsiang/po-lu hsiang* (camphor)*, suhe hsiang* (storax), *jishe hsiang/ding hsiang* (clove) and *zhan tan* (sandalwood), all played important roles in Chinese culture and social life.[57] It seems surprising that although they each have plenty of Chinese records, they are not precisely identified in most modern scholars' works. The reason for that is because many aromatic names are still used in modern time, and scholars generally ignore the possibility that they may be used to refer different plants. This part will try to solve those mistakes and confusions that are common in other works.

薰陆 *XunLu* (Frankincense)

Commonly valued as a treasure of Arabia, this well-known aromatic resin is produced by several species of the Boswellia family that grow also in India and Horn of Africa.[58]. Archaeological evidence shows that it has been imported by China since late second century B.C through maritime trade.[59] Frankincense's first appearance in text was in third century CE. It was named as *xunlu* in the third century chronicle *Wei Lue*.[60] A piece of West Han wrap paper excavated from Xuan Quan Zhi, Dunhuang has a word "*xunli"*on it, and a wood slip excavated from the Yin Wan Han tomb in Jiangsu mentions "eight *dou* of *xun'ai.*" Both *xunli* and *xun'ai* were identified by Xiancheng Zhang as synonym of *xunlu*, showing that frankincense was imported through overland trade in Han dynasty.[61] Ji Xianlin thinks *xunlu* is a transliteration of

[57] Order of the aromatics is random.
[58] A.F.L. Beeston, "The Arabian Aromatics Trade in Antiquity," Proceeding of the Seminar for Arabian Studies (2005): 53.
[59] *Xi Han Nan Yue Wang Mu*, 141.
[60] Yu Huan, *Wei Lue*, quoted in *Tai Ping Yu Lan*, 982:646.
[61] Zhang Xiancheng, "The Annotated Research on "Xun du", "Xun li" As Seen in Excavation of the Remains of Western Han dynasty," 207-209.

Sanskrit *kunduru*.[62] This indicates that at the time frankincense might have been imported from India or brought to China by Indian merchants, however, the resin was less likely to be the native Indian frankincense *Boswellia serrata*. Early third century Chinese texts generally claim that *xunlu* comes from Da Qin.[63] Da Qin represents different countries throughout history. Scholars hold differing opinions on whether it represents Roman Empire or Syria in the third century.[64] Although neither of them was an origin of frankincense, both countries were big commerce center on ancient spice trade. They received shipments from Moscha (Mocha), the main source of Arabian frankincense, or from the Barbarian region where African frankincense grew.[65] It is possible that the precious resin was then transported to China by Indians, through which its Sanskrit name *kunduru* was adopted, and its origins were forgotten.

The Chinese knew more about frankincense in the fourth century, although they still did not know where it truly came from. They knew that it grew in "sands beside the sea," and during summer it released the valuable resin from its wounds.[66] Then, the local people collected the resin, either sold it to the merchants, or "eat it themselves if there is no merchant passing by."[67] Chewing frankincense is still practiced by Arabians nowadays in order to clean teeth and fresh breath.

In the seventh century, at least two different kinds of frankincense had been brought to China. In *Xing Xiu Ben Cao*, Su Gong (599-674 CE) wrote that "*xunlu* from Tianzhu (India) is white, and

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[62] Bianji, Ji Xianlin, and Xuanzang, *Da Tang Xi Yu Ji Jiao Zhu* (Beijing: Zhonghua shu ju, 1985), 773. Bowen Yang in his annotation of *Zhu Fan Zhi* (Records of Foreign People) also supports this idea.
[63]Yu Huan, *Wei Lue*; Ji Han, *Nan Fang Cao Mu Zhuang*, all quoted in *Tai Ping Yu Lan Li*, 982:646.
[64] Zhang Xinglang, *Zhong Xi Jiao Tong Shi Hui Bian*, 113-114
[65] James Innes Miller, *The spice trade of the Roman Empire, 29 B.C. to A.D. 641* (Oxford: Clarendon Press, 1969), 103; *The Periplus of the Erythraean Sea*: *Travel and Trade in the Indian Ocean by a Merchant of the First Century*, trans. Wilfred H. Schoff (New York: Longmans, Green, and Co., 1912), 35.
[66]Ji Han, *Nan Fang Cao Mu Zhuang*; Ge Hong, *Bao Pu Zi*, all quoted in *Tai Ping Yu Lan*, 982:646.
[67]Guo Yigong, *Guang Zhi*, trans. Shiyong Lu, quoted in *Tai Ping Yu Lan,* 982: 646.

the one from Chanyu has green tint."[68] Chanyu refers to the Chanyu Protectorate, which is now Inner Mongolia. It would be better to consider both places as entrepots on the Silk Road, like Da Qin. What is interesting from this record is that the frankincense with "green tint" belongs to the highest and most special grade of the Arabian frankincense *Boswellia sacra*. Known as Green Hojary frankincense on present-day market, it is an exclusive product of the Dhofar region in Oman. The green tint fades as time goes, thus Su's record suggests that not only did Chinese in seventh century have access to the best frankincense of the world, they also managed to receive the freshest one.

Another interesting record of the frankincense is from *Hai Yao Ben Cao* written by Li Xun in early tenth century. Li Xun (ca. 855-930 CE) was from a Persian spice merchant family, and he learnt abundant knowledge of foreign aromatics. His work mentions *xunlu* and *rutou hsiang* ("nipple" incense). Frankincense has been called *ru hsiang since the Song dynasty.* Similarity between *rutou hsiang and ru hsiang* makes ancient and modern scholars consider the latter as abbreviation of the former one, but it seems unlikely that *rutou hsiang* is actually frankincense. According to Li Xun, it is "a Persian pine resin from South Sea, and the good one is as purple-red as cherries."[69] Red or brown frankincense does exist; however, it has always been graded as the lower and cheaper one on market. If *rutou hsiang* really refers to frankincense, how could people in Tang Dynasty value the inferior red frankincense after they experienced the best Green Hojary frankincense? On the other side, according to my observation, even the darkest frankincense

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[68] Su gong, *Xin Xiu Ben Cao*, trans. Shiyong Lu, in Tang Shenwei, *Xin Bian Lei Yao Tu Zhu Ben Cao* 21, Manuscript, Imperial Household Agency: Archives and Mausolea Department, http://db.sido.keio.ac.jp/kanseki/T_bib_frame.php?id=006900

[69] Li Xun, *Hai Yao Ben Cao*, trans. Shiyong Lu, in Tang Shenwei, *Chong Xiu Chong xiu Zhenghe jing shi zheng lei ben cao* (Beijing: People's Medical Publishing House, 1957), 12:309.

cannot be as purple as cherries. Therefore, Li Xun's *ru tou hsiang* is more likely to be a different, Southeast Asian aromatic resin.

安息香 *Anxi Hsiang*

During this period, *anxi hsiang* was valued by the Chinese as a precious and important aromatic resin. It was one of the few aromatics that would be specifically pointed out in official chronicles if a foreign country was said to produce. Both Laufer and Schafer interpret the word as Arsacid Incense or Parthian Incense, however, it was never listed as Arsacid (Anxi)'s specialty by ancient Chinese historians, or among the tributes sent by Arsacid rulers to the Chinese emperors.[70] It was first claimed to be a product of Qiuci (Kucha) in the sixth century *Wei Shu*.[71] Then, the seventh century *Sui Shu* adds Cao Guo as its second origin.[72] Later, the Tang writers Duan Chengshi (803?-863 CE) and Li Xun said it was a product of Persia, while Su Gong gave a more broad region Xi Rong, a synonym of the West Regions. [73] None of these places is related to Arsacid. It is abnormal if an aromatic named after Arsacid has no connection with the place Arsacid at all, therefore it seems that here the word Anx*i* is not a transcription of Arsacid, but should be literally understood as "rest and relax," which may be related to functions and medical usage of the resin.

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[70] Berthold Laufer, "SINO-IRANICA: Chinese Contributions to the History of Civilization in Ancient Iran." *Publications of the Field Museum of Natural History. Anthropological Series* 15, no. 3 (1919):465; Edward H. Schafer, *The Golden Peaches of Samarkand: A Study of T'ang Exotics* (Pickle Partners Publishing, 2016), 169. Kindle. The Song Dynasty writer Chen Jin claimed in his *Hsiang Pu* (incense journal) that he quoted from *Hou han Shu Xi Yu Zhuang* "Anxi Hsiang is from Anxi," but I cannot find the same information in the original book. This quote only exists in Chen's journal, no one else ever wrote similar things, which makes me question its credibility.

[71] Wei Shou, *Wei Shu*, 102.

[72] Cao Guo, an ancient kingdom north of Samarkand. Wei Zhi, *Sui Shu* 83:1857; Zhang Xinglang, 1363.

[73] Duan Chengshi, *You Yang Za Zu* 18, Manuscript. From The China-US Million Book Digital Library Project, 146, https://archive.org/details/06047415.cn/page/n142; Li Xun, *Hai Yao Ben Cao*, 13:330.

If geological information is irrelevant to the identification of *anxi hsiang*, we may get some clues from Buddhist texts and stories. By far, the earliest appearance of *anxi hsiang* in Chinese text is from the story of Kucha Buddhist Fo Tu Deng in fourth century CE, suggesting that it might be initially brought to China by foreign Buddhist monks. Fo Tu Deng was famous for his supernatural power. He successfully summoned a dragon to deliver rain after burning *anxi hsiang* and praying for three days.[74] Here *anxi hsiang* was used to communicate with gods or holy spirits. This along with the ability to drive away evil spirits were mentioned by Duan Chengshi, Li Xun and Su Gong. In seventh century, a South Asian Buddhist Jia Fan Da Mo identified *anxi hsiang* as *chu ju luo*, which was transliterated from Sanskrit *guggulu* (*Commiphora mukul*), commonly known as Indian bdelliun or gum guggul.[75]

The physical properties and medical usage of gum guggul mentioned in Ayurvedic writings are in many ways similar to Chinese records of *anxi hsiang*. Both resins are said to be black or dark yellow, and are collected in cold season.[76] Su Gong wrote that the fresh *anxi hsiang* is soft and sticky, and Duan Chengshi said the resin is like "syrup."[77] According to my observation, fresh gum guggul is soft and sticky. When comes to the function and usage, the two resins share more similarities. The second millennium BC text *Atharva Veda* grants gum guggul with the power to protect human body from diseases and curses, which is similar to *anxi hsiang*'s ability to ward off

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[74] Fang Xuanling et al, *Jin Shu* [Book of Jin], quoted in *Tai Ping Yu Lan*, 982:645-46.
[75] Chen Ming, "Yi Shi yu Chuan Chao: Si Lu Han Wen Mi Jiao Zhong de Wai Lai Wen Wu (Translation and Duplication: Transliteration of Foreign Medicine in Silk Road's Chinese Esoteric Buddhism Texts)," *Studies in World Religions* no.1 (2016), 30.
[76] Duan Chengshi , *You Yang Za Zu* 18, 146; Li Xun, *Hai Yao Ben Cao*, quoted in Tang Shenwei, *Chong Xiu Chong xiu Zhenghe jing shi zheng lei ben cao*, 13:43; V. V. S. Sastry, "History of Guggulu Based on Ayurvedic Literature," *Bulletin of the Indian Institute of History of Medicine* 6, no.2 (1976): 103. It should be pointed out that all Chinese scholars and herbalists during this period use Chinese lunar calendar. Therefore, when Duan Chengshi said *anxi hsiang* was collected in the "sixth or seventh month after it is hardened," it is actually in fall not summer. Li Xun agreed that the collect time was in "autumn months"
[77] Su gong, *Xin Xiu Ben Cao*, trans. Shiyong Lu, in Tang Shenwei, *Xin Bian Lei Yao Tu Zhu Ben Cao* 23, 13:43; Duan Chengshi , *You Yang Za Zu* 18, 146

evil spirits.[78] In *Charaka Samhita*, gum guggul is used to restore consciousness or resuscitative, the disease of head and hiccups.[79] This function could be roughly translated in Chinese as *anxi* (rest and relax)——not perfectly match, though——by early South Asian Buddhists whose Chinese were poor. The *Susruta Samhita* says gum guggul is "beneficent to the heart," while Su Gong too said *anxi hsiang* can be used in the disease of heart.[80] The seventh century writer Vagbhata prescribed *guggulu* in the diseases of *sukra* (semen), while Li Xun said *anxi hsiang* could be used to solve nocturnal emission.[81]

The above comparison suggests that the Chinese *anxi hsiang* is very likely to be the Indian gum guggul. This relation on the other hand, helps to explain Li Xun's conflicting statement that "*anxi hsiang* is from South Sea and Persia."[82] The *Atharva Veda* mentions gum guggul is "either born from Sindhu or from the Sea." Sayana further explained that the resin is available from two sources, Sindhudesa and the sea coast.[83] The Periplus also records gum guggul as main product exported by Barbarike and Ozene, both of which were probably located in Northern India near modern day Pakistan.[84] Sindhudesa and the other two ports were close to Persia. According to Boqing Jiang, people in Dunhuang still called it Persia after the Sasanian Empire was conquered by Muslims.[85] Therefore, assuming gum guggul is Li Xun's *anxi hsiang*, it is understandable why he thought it came from Persia. Laufer and other scholars think Li Xun's record proves that at the end of tenth century, the name "*anxi hsiang*" was transferred to benzoin (from *Styrax benzoin*), an

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[78] Sastry, "History of Guggulu," 103
[79] ibid，104-105
[80] Sastry, "History of Guggulu," 105; [80] Su gong, *Xin Xiu Ben Cao*, trans. Shiyong Lu, in Tang Shenwei, *Xin Bian Lei Yao Tu Zhu Ben Cao* 23, http://db.sido.keio.ac.jp/kanseki/T_bib_frame.php?id=006900
[81] quoted from Sastry, "History of Guggulu," 107; Li Xun, *Hai Yao Ben Cao* 13:330,
[82] Ibid.
[83] Sindhudesa, an ancient Indian kingdom located in modern Pakistan. Sastry, "History of Guggulu," 103.
[84] *The Periplus of the Erythraean Sea*, 37, 42.
[85] Jiang Boqing, 56.

aromatic resin indigenous to the Malay Archipelago, but they ignore that Li Xun said *anxi hsiang* "looks like peach tree resin."[86] Compared physical characteristics of all three resins, the dark-red transparent peach tree resin looks more similar to the dark transparent gum guggul rather than the yellow-orange opaque benzoin.

郁金香 *Yujin Hsiang*

The name *yujin hsiang* is extremely confusing, because it has been granted to at least three different plants by the end of tenth century. It first appears in Zhen Xuan (127-200 CE)'s comment on preparation of sacrificial wine in *Zhou*: "Grind *yujin* and boil it to mix with the sacrificial wine. *yujin* is the name of a grass. One bulk has ten leaves. Grind one hundred and twenty bulks at a time."[87] According to Zhen Zhong (?-83 CE), *yu* itself represents a ten-leaf fragrant plant, which looks like orchid.[88] Xu Shen (58-148 CE) said the *yu* plant was a tribute from the Yulin Jun, which was located in Southern China.[89] Laufer's statement that *yu* plant was turmeric is wrong because he mistaken the plant part that was used to make the wine, and overlooks characteristic of leaf of the *yu* plant mentioned by Han Chinese scholars.[90] Thus, Zhen Xuan's *yujin* was likely to be *the yu* plant, a native Southern Chinese plant.

Then, why did Zhen Xuan add *jin* (gold) to the name of the plant? It could refer to color of the boiled potion or it could refer to color of the plant's flower. Zhu Mu (100-163 CE)'s composition *Yujin Fu* (Praise of *Yujin)* suggests that *yujin* blooms in the beginning of summer with golden

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[86] Laufer, 465; Li Xun, *Hai Yao Ben* Cao, 13:330
[87] *Zhou Li* [the State Ceremonial of the Zhou Dynasty], trans. Shiyong Lu, quoted in *Tai Ping Yu Lan*, 981:644.
[88] Huang Yizhou, *Li Shu Tong Gu,* Manuscript, https://ctext.org/wiki.pl?if=gb&res=249770&searchu=郁金&remap=gb.
[89] Ibid.
[90] Laufer, 314.

flowers, and has flower stems arisen from foliage leaves.[91] Unlike later literature, his work neither describes *yujin* as a foreign plant nor lists it among other known exotic aromatics (a common way used by early Chinese writers to suggest an object's foreign origin), therefore his *yujin* was very likely to be the native *yu* plant.

Other plants might borrow the name *yujin,* if they could be used to flavor wine, and meet one of the requirements: golden flower or to dye the wine golden.[92] The first new *yujin* appeared in the *Nan Zhou Yi Wu Zhi*, written by Wan Zhen, a third century official of Eastern Wu:

> *Yujin* is from Jibin (Kashmir). People there grow the plant. They first use the plant to worship Buddha. After it withered, they take it back and collect the *yujin*. It's yellow and fine, like threads of lotus flower. It can be used to perfume the wine.[93]

Judging from the collecting process, *yujin* in this description refers to saffron. People today are firmly believed that saffron should be red, but yellow saffron does exist. It is a signature product of Kashmir and is still available on present-day market, known as Pati saffron.[94] The yellow saffron might even come to market much earlier than the common red saffron, since the word saffron deprived from Persian word *zaparan*, meaning "yellow stigma." Wan Zhen's description was quoted in the seventh century *Liang Shu* and *Nan Shi*, but writers of the books omitted the fact that *yujin* was collected from the flower, creating a illusion that it was the flower itself, rather than its

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[91] Ouyang Xun, *Yi Wen Lei Ju* (Shanghai: Shanghai gu ji chu ban she, 1999), 81:1394.
[92] Schafer translates Yujin Hsiang as "a golden substance as sweet-smelling as the yu-plant used in making sacrificial wines in antiquity." He ignores the most important prerequisite for being *yujin hsiang*, that is, the ability to flavor the wine.
[93] Wan Zhen, *Nan Zhou Yi Wu Zhi*, trans. Shiyong Lu quoted in *Tai Ping Yu Lan* 9, 644. The original text reads 与芙蓉华里披莲者相似 (*yu fu rong hua li pi lian zhe xiang si*). Laufer's translation of this sentence is full of mistakes due to his limited knowledge of classical Chinese literature. In this case, *fu rong* is a synonym of lotus flower, not the plant *Hibiscus mutabilis*; and *lian* does not refer to the lotus flower, but to the lotus seed or the seed head. Therefore, *pi lian zhe* means the thing that covers the lotus seed head, which is the threads.
[94] The Pati saffron is the style of saffron flower, while the common red saffron is the stigma of the flower. http://sapphirekashmirisaffron.com/2017/04/06/pati-saffron/

threads, that was yellow and fine.[95] As a result, herbalists in later dynasties often confused *yujin* with safflower. For example, the Tang herbalist Chen Cangqi (687-757 CE) wrote that *yujin hsiang* resembles *hong lan hua* (safflower).[96] The confusion was not solved because the Chinese had no opportunity to see the whole plant of *yujin hsiang* until 647 CE, when Jiapi (Khulm, Afghanistan) offered it as a tribute to Emperor Tai Zong of Tang. The emperor then ordered his scholars to record the foreign plant in detail, from which we can clearly identify it as saffron:

> It looks like *mai meng dong* (*Ophiopogon japonicus*). It blooms in the ninth month. Its flower resembles lotus flower. Its color is purplish blue. Its aroma can be smelled from several tens of paces away. Although it blooms, it does not yield fruit. Those who wish to plant it need to take the root.[97]

Other origins of *yujin hsiang* mentioned in Chinese official chronicles from third to seventh centuries include the Roman Empire, Persia and India.[98] Persia had long been considered as a great exporter of saffron, and Roman Empire was a big consumer of saffron. Therefore, it is very likely *yujin hsiang* from these two countries was also saffron. But India is a complicate case. The Chinese writers knew India was both an entrepot and a region of origin of *yujin.* According to *Liang Shu* suggests that Zhong Tianzhu received Jibin's *yujin* through its maritime trade with with Da Qin.[99] Here *yujin* referred to saffron. But Xuanzang's (602-664 CE) writing is not clear. In his *Great Tang Records on the Western Regions*, the great Tang Buddhist monk-traveller

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[95] Yao Silian, *Liang Shu*［Book of Liang], (Beijing: Zhong hua shu ju, 1973), 54:798; Li Yanshou, *Nan Shi* [History of the Southern Dynasties], 78. I do not reject the fact that safflower has been intentionally used to fake saffron through the ancient spice trade.
[96] Chen Cang Qi, *Ben Cao Shi Yi*, quoted in Tang Shenwei, *Chong Xiu Chong xiu Zhenghe jing shi zheng lei ben cao*, 13:331.
[97] *Ce Fu Yuan Gui*, 970:11231. I have no idea why Schafer identified *mai meng dong* as "black leek" (*Liriope graminifolia*).
[98] Yao Silian, *Liang*, 54:790, 798; Wei Shou, *Wei Shu*, 102:2270
[99] Zhang Xun identified the Zhong Tianzhu as the surrounding region of the Ganges River. The Periplus mentions a port besides the River Ganges, also named Ganges that exported Gangitic spikenard. Therefore, it's true that the Ganges area traded with the Mediterranean world. *Liang Shu,* 54790; Zhang Xun, 32-33; *The Periplus of the Erythraean Sea*, 47.

recorded that *yujin* paste was used to paint stupa and was applied to human body.[100] Here *yujin hsiang* could refer to saffron, because painting stupa with saffron water is still a Buddhist tradition; but it could also refer to turmeric, because damp themselves with turmeric paste after bath is a common practice in India. [101] In Sanskrit, the word for turmeric powder is *kumkuma,* and the word for saffron is *cuncuma*. Similarity between the two words may cause Xuanzang's confusion.

In other Tang Dynasty texts, *yujin* seems to be a species from the Curcuma family. For example, Su Gong wrote that:

> [*Yujin*] grows in *Shu* region (Sichuan) and the West Region. The plant assembles turmeric. Its flower is white with red end, rising from the heart of stem in fall, and does not bear fruit. Its root is reddish yellow.[102]

He also pointed out the using plant part is its root, a clear proof of a Curcuma rather than saffron. Another example happened in 726 CE, when King of Dong An (Northeast Bukhara, Uzbekistan) offered 19.8 kilograms of *yujin hsiang* as a tribute to the Chinese emperor.[103] Here *yujin* is more likely to be a Curcuma since Uzbekistan has never been a region of origin or a trading center of saffron.

It's interesting that people in Tang Dynasty seemed to not be aware of the fact that there were at least two foreign plants bore the same name *yujin*. In most poems and literature, usually only the name *yujin* or the wine that it flavored were mentioned, from which we cannot decide whether it means saffron or a Curcuma.

婆律香 Polü Hsiang /龙脑香 Longnao Hsiang/ (Borneo camphor)

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[100] Bianji, Ji Xianlin, and Xuanzang, *Da Tang Xi yu Ji Jiao Zhu*, 181, 680
[101] See the Boudhanath Stupa in Nepal; Hayavadana C. Rao, "Indian Ceremonial Baths," *Anthropos*12/13, no. 1/2 (1917): 85.
[102] Su gong, *Xin Xiu Ben Cao*, trans. Shiyong Lu, in Tang Shenwei, *Xin Bian Lei Yao Tu Zhu Ben Cao* 23, 13:46.
[103] Dong'an Guo Wang Du Sa Bo Ti, "*Yu Shi Biao*," in Quan Tang Wen, ed. Dong Gao, *Quan Tang Wen* (Beijing: Zhong hua shu ju, 1983), 999:10353.

Both names initially appeared in pre-Tang official chronicles. first appeared in Liang Shu as an aromatic produced by Lang Ya Xiu (Northern Thailand).104 *Longnao hsiang*, first appeared in Sui Shu as a tribute offered by Chi Tu (Songkhla, Thailand) to Sui Envoys in 607 CE.105 No detail concerning physical characteristics was mentioned in either chronicle.

In Tang dynasty, the two names were said to be produced by the same species. According to Su Gong, *polü hsiang* was the liquid resin (he called it *polü gao*, or *polü* syrup), while *longnao hsiang* was the dried gum.[106] Xuanzang identified *longnao hsiang* with *jiebuluo hsiang*, transcribed from Sanskrit word *karpura*, which is camphor.107 There are two types of camphor, one is Chinese or Indian camphor (*Cinnnamomum camphora*), the other is Borneo camphor (*Dryobalanops aromatica*). Both Su Gong and Duan Chenshi said *longnao h*siang came from Borneo.[108] Thus, the camphor that imported to China during this period should be the Borneo camphor (*Dryobalanops aromatica*).[109] *Polü* might be the transliteration of Borneo. The name *longnao hsiang*, literally meaning dragon's brain incense, probably just follows Chinese tradition to link rare objects with mythical creatures.

Borneo camphor may be imported to China through maritime trade as early as second century B.C.E, according to a new interpretation of *guobu* mentioned in *Shiji* as a transcription of camphor's Malaysian name.[110] In Tang Dynasty when maritime trade was extremely flourishing,

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[104] Yao Silian, *Liang Shu,*54:795.
[105] Wei Zhen, *Sui Shu*, 82:1833.
[106] Su gong, *Xin Xiu Ben Cao*, quoted in Tang Shenwei, *Xin Bian Lei Yao Tu Zhu Ben Cao* 22, 13:16.
[107] Bianji, Ji Xianlin, and Xuanzang, *Da Tang Xi yu Ji Jiao Zhu*, 859
[108] Su gong, *Xin Xiu Ben Cao*, quoted in Tang Shenwei, *Xin Bian Lei Yao Tu Zhu Ben Cao* 22, 13:16; Duan Chengshi, *You Yang Za Zu* 18, 146.
[109] In fact, the so-called Chinese camphor came much later in the Chinese traditional medicine, and was very likely to be made as a cheap substitude for the expensive Borneo camphor.
[110] Han Huaizhun, "Long Nao Hsiang Kao" (Research on Longnao Hsiang), *Journal of South Seas Society* 2, no.1 (1941), quoted in Sun Ji, *Handai Wuzhi Wenhua* (Material Culture of Han Dynasty), (Beijing: Wenwu Chubanshe, 1991, 361.

Borneo camphor soon became a major imported commodity. The Tang people found methods to better store the precious resin. Su Gong said, "it will not evaporate if stored with rice charcoal and *xiangsi zi* (red bean)."[111]

Tang Buddhist monk-travelers offered detailed descriptions of camphor collection in Southeast Asia. In *Great Tang Records on the Western Regions*, Xuan Zang said:

> *Jiebuluo hsiang* tree is wet when cut off, and does not have resin. After it dries, the *jiebuluo* can be found through the wood. It looks like mica, and has the color of snow. This is what called *longnao hsiang*.[112]

A more interesting description is made by Duan Chengshi, which is very similar to ibn khurdadhbih's record, suggesting Duan might learn that from a Arabian merchant:

> The tree has fat one and thin one. The thin one has *po lu gao* Others said the thin one has dragon's brain, while the fat one has Borneo syrup. Both are in the middle of the tree, and can be collected by cutting down the tree. A pit is carved on the trunk to store the syrup that flows from the end of the tree.[113]

> To get camphor they make an incision at the top of the tree. From this the water of camphor escapes in sufficient quantity to fill several jars. Once it has been collected another incision is made lower down, about the middle of the tree, from which the pieces of camphor fall. It is the gum of the tree, but it is found in the wood itself. Once the operation has been performed, the tree becomes useless and dries out.[114]

Besides its collection, Chinese people were familiar with its local practices, such as its usage in the burial rites. The Old Book of Tang recorded that Duo Po Deng (near Sumatra) added both liquid and dry camphor to the dead, then burned it all.[115] According to Schoff, the Batak people covered their dead chiefs with camphor, so did other Indonesian tribes.[116] Another usage of camphor was to clean mouth, usually paired with *pin-lang* (betel nuts). Yi-ting recorded that the

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[111] Su gong, *Xin Xiu Ben Cao*, quoted in Tang Shenwei, *Xin Bian Lei Yao Tu Zhu Ben Cao* 22, 13:16.
[112] Bianji, Ji Xianlin, and Xuanzang, *Da Tang Xi yu Ji Jiao Zhu*, 859
[113] Duan Chengshi, *You Yang Za Zu*, 18:143, https://archive.org/details/06047415.cn/page/n142.
[114] ibn Khordadbeh, "Kitāb al-Masālik w'al- Mamālik," quoted in Andrew Dalby, *Dangerous Tastes: the story of spices* (Los Angeles: University of California Press, 2000), 57
[115] Liu Xu, *Jiu Tang Shu*, 197:5273.
[116] Wilfred H. Schoff, "Camphor," *Journal of the American Oriental Society* 42 (1922), 356

Buddhists in Southern Sea ate betel-nuts and nutmegs that mixed with cloves and Baros-camphor to make their mouth fragrant.[117] Xuanzang received twenty betel-nuts, one *liang* (about 30 grams) of camphor and other things every day during his study at the Nalanda monastery in India.[118] The New book of Tang also recorded that people in *Zhen la* (Cambodia) welcomed their guests with betel-nut powder, camphor and clam shell powder.[119]

Unlike like many foreign aromatics that came from places far away, Borneo camphor was from a region that some Chinese had been to, so there was less ambiguity in the resin's origin. Because camphor played an important role in Buddhist rituals, information related to it was carefully recorded by Chinese Buddhist monk-travelers.

苏合香 ***Suhe Hsiang***

The name *suhe* might be a transliteration of Greek word *sturax*, a resin produced by *Liquidambar orientalis*, which is native to the south-west of Asia Minor.[120] It might be brought to China as early as first century CE. Ban Gu (32-92 CE) wrote to his brother Ban Chao that Han officer wanted to exchange silk for horses and *suhe*.[121] Like *xunlu* and *anxi hsiang*, *suhe*'s "origin" was recorded in official chronicles. *Hou Han Shu* first describes it as a product of Da Qin (Roman

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[117] I-Tsing, A Record of the Buddhist Religion as Practised in India and the Malay Archipelago (A.D. 671-695), tran. J. Takakusu (Oxford: The Clarendon Press, 1896), 48.
[118] Hui Li, *A biography of the Tripiṭaka master of the great Ci'en Monastery of the great Tang dynasty*, trans. Li Rongxi (Berkeley, California: Numata Center for Buddhist Translation and Research, 1995), 93
[119] Ouyang Xiu and Song Qi, *Xin Tang Shu* [New Book of Tang], (Beijing: Zhong hua shu ju, 1975), 222:6301.
[120] F. N. Howes, "Age-Old Resins of the Mediterranean Region and Their Uses," *Economic Botany* 4, no. 4 (1950), 315
[121] Ouyang Xun, *Yi Wen Lei Ju*, 85:1456.

Empire).[122] *Wei Shu* says it also came from Persia.[123] *Liang Shu* said it could be found in India.[124] Again this follows Chinese record tradition of turning entrepots into regions of origin.

There are two famous assumptions of what *suhe hsiang* was made from. One is that it was the feces of lion, recorded by Tao Hongjing (456-536 CE). It is hard to trace where this assumption came from. Modern Chinese scholars say that foreign merchants made it up to make the aromatic more exotic. Lauder suggests liquid storax is called *rasamala* by Malaysians and Javanese, which means dung in Sanskrit, which might be used by merchants to boast their goods.[125] It is to believe however, that any merchant who would succeed in selling his goods by depreciating them as animal waste. Not to mention that Chinese had already received lions as tribute-gift since Han Dynasty.[126] By far, the only connection that can be found between storax and animal is Pliny's description that Arabians burned storax in goat-skins.[127]

The other assumption is that *suhe hsiang* was an artificial paste made by boiling different aromatics together, also recorded in *Hou Han Shu*.[128] Later, *Liang Shu* added that the *suhe hsiang* sold to the Chinese was residue after original plants had been extracted by people of Da Qin, therefore it was less fragrant.[129] Ibn Masawaih agreed that the residue of the storax is the most inferior grade.[130] In Tang Dynasty, a new kind of *suhe hsiang* appeared in Chinese market. Su Gong described it as "reddish purple, solid, strongly fragrant, heavy as stone."[131] Unfortunately, according to Dioscrorides, this too was not the genuine storax, but "wax or tallow imbued with

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[122] Fan Ye, *Hou Han Shu*, 88:2919.
[123] Wei Shou, *Wei Shu*, 102:2270.
[124] Yao Silian, *Liang Shu*, 54:790.
[125] Laufer, 456.
[126] Fan Ye, *Hou Han Shu*, 3:158.
[127] Pliny, ch.40
[128] Fan Ye, *Hou Han Shu*, 88:2919.
[129] Yao Silian, *Liang Shu,*54:798.
[130] Ibn Masawaith and his
[131] Su gong, *Xin Xiu Ben Cao*, quoted in Tang Shenwei, *Xin Bian Lei Yao Tu Zhu Ben Cao*, 12:45.

aromatics."[132] Not until mid-eighth century did the Chinese experience the genuine preferred yellow-white storax that was valued by Greeks Romans and Arabians, but it seems that the Chinese still did not get access to the best "clear, refined, flowing red" storax that Pliny and Ibn Masawaih praised. [133] The reason for this might be that storax were in much great demand in the Mediterranean world (resin-flavored wine, perfume oil, etc.,) and little was left to be exported to the Far East.

丁香 ***Ding Hsiang/***鸡舌香 ***Jishe Hsiang*** **(clove)**

There is less doubt that *jishe hsiang* (chicken's tongue incense) and *ding hsiang* (nail incense), were Chinese names for clove, the fragrant dried bud of *Syzygium aromaticum*, both after the aromatic's shape. Clove came to China as early as the second century CE.[134] During early stage of clove importation, *jishe hsiang* was a dominant name for clove. Holding *jishe hsiang* in mouth was a common practice of Han courtiers while reporting to the Emperor.[135] A direct trade probably established in the third century by Eastern Wu. Kang Tai, a Wu envoy who has been sent to the Southeast Asia as, mentioned that *jishe hsiang* was from Wu Ma Zhou (Maluku, Indonesia).[136] The dried fruit of clove tree was imported to China along with clove, also under the name *jishe*

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[132] Daniel Hanbury, "On Storax," *Pharmaceutical Journal and Transaction* (1857), 4.
[133] Chen Cang Qi, Tang Shenwei, *Xin Bian Lei Yao Tu Zhu Ben Cao* 21, 12:45: Pliny, *Natural History*, Book xjj, chapter 55, quoted in Daniel Hanbury, "On Storax,"4; Martin Levey, "Ibn Masawaih and his treatise on simple Aromatic Substances: Studies in the History of Arabic Pharmacology", *Journal of the History of Medicine and Allied Science* 16, no.4 (1961), 408
[134] I don't agree with Wheatley's statement that clove trade between China and Moluccas went back as far as the second half of the first millennium B.C. through South Yueh. First, no evidence of clove was found in the tomb of King of South Yueh during excavations. Second, the Ying Shao (ca. 153-196 CE) once recorded a famous anecdote that an old high officer named Nai Cun mistaked the spicy clove with poison. If clove did enter in Chinese market as early as Wheatley suggested, it would be hard to imagine a high position officer in second century CE was not familiar with the aromatic. Miller, 49; Li Fang, *Tai Ping Yu Lan*, 981:645
[135] Ying Shao, *Han Guan Yi* (Principles of Han Officials), 2:194, https://ctext.org/wiki.pl?if=gb&chapter=718541&remap=gb#p145
[136] Kai Tai, *Wu Shi Wai Guo Zhuan,* quoted in Li Fang, *Tai Ping Yu Lan*, 981:645.

hsiang. Zhen Xuan once commented on a second century incense recipe, clarifying using "the son of *jishe hsiang* instead of the mother."[137] "Son" and "mother" referred to the different sizes.

The name *ding hsiang* did not appear in text until sixth century. *Qi Min Yao Shu*, a sixth century agricultural text, saying that *ding hsiang* is an unaesthetic synonym used by low class people because the spice looked like nail.[138] This may explain why the name was also used by Buddhist monks in their translation of Buddhist texts and travel journals. For example, Yi-ting said *ding hsiang* was one of products produced by Sribhoga (Sumatra), and was brought to Kwang-tung (Guangzhou) by a Persian merchant.[139] Herbalists in Tang dynasty began to differentiate the two products of clove tree, using *jishe hsiang* for the fruit, and *ding hsiang* for the bud.[140] But *jishe hsiang* was still used to refer clove in some cases. For example, because of its link with court traditions, poets and writers used it to indicate someone who held a position in court. For example, in his poem to his former colleagues, the famous Tang poet Bai Juyi wrote "[We] hold goose-feather pen vis-à-vis, [and] both keep *jishe hsiang* in mouth.[141]

Another product of clove tree used by the Chinese is the bark. It was used in an incense recipe that was supposed to be from the East Han Dynasty: "An incense recipe from the Han court in Jiannin period (ca. 168-172): ...five *liang* of clove bark...grind all aromatics into powder and mix them with heated honey. Seal it for more than a month, then mold it into pills and use it."[142] This is by far the earliest usage of clove bark in incense recipe. It appears in several other recipes as

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[137] *Han Gong Xiang Fang Zhen Zhu* (Zhen's Commentary on an Incense Recipe of Han Court), in Zhang Bangji, *Mo Zhuang Man Lu*, chapter 2, https://zh.wikisource.org/wiki/墨莊漫録/卷二.
[138] Jia Sixie, *Qi Min Yao Shu*, Manuscript. From the China-US Million Book Digital Library Project, 5:75, https://archive.org/details/06049859.cn/page/n74
[139] I-ting, 48.
[140] Chen Cang Qi, *Ben Cao Shi Yi*, quoted in Tang Shenwei, *Chong xiu Zhenghe jing shi zheng lei ben cao*, 12:307. A plain name for the fruit later appears in Li Xun's work, which he name it *mu ding hsiang* (mother-of-clove).
[141] Bai Juyi, *Bai Hsiang Shan Shi Ji*, Manuscript, (Zhongguo: Yun sheng tang, 1703), 15:31 https://hdl.handle.net/2027/mdp.39015078165761
[142] Zhou Jiazhou, *Hsiang cheng*, Manuscript, Book 13.

well, but their exact date could not be determined. Clove bark is possibly the "cloveswood" recorded by Cosmas in his Christian Topography, instead of Andrew Dalby's interpretation of "cloveswood" as mace.[143] Today for most people, clove becomes the only known product of *Syzygium aromaticum*, nevertheless Chinese still use mother-of -clove in their traditional medicine. Clove bark however, has been deleted from modern spice market.

旃檀 *Zhan Tan* (Sandalwood)

Like clove, there is no doubt that *zhan tan* refers to sandalwood, the heartwood of *Santalum album*. It is native to South India and lands of Indonesia. Ancient Chinese writers had little doubt that this lovely aromatic wood was a product of India, though sometimes they recorded in a broader sense that it came from "South Sea", in other words, South East Asian.[144]

Several names were used to represent sandalwood, including 旃檀 (*zhan tan*), 白旃檀 (white *zhan tan*) 赤旃檀(*chi zhan tan*) or 檀香 (*tan hsiang*). The word *zhan tan* is the very first name of this lovely aromatic wood, which is transcribed fron the wood's Sanskrit name *candana*. This name, however, should be differentiated from the Chinese word *tan*. It is not appropriate to simply consider tan as an abbreviation of *zhan tan*. Tan is a very old word. It represents a native Chinese hard wood, which is the subject of several poems in the oldest Chinese poetry collection *Shijing*, Classic of Poetry). In their commentaries to Shijin, Chinese scholars from third century BCE to fourth century CE identified *tan* as a tree with "green and smooth bark" that was best known for

[143] Dalby, *Dangerous tastes*, 83. To examine the possibility of having clove bark as an aromatic, I manage to bought some dried bark from a clove plantation in Sri Lanka. The bark releases a mild pleasant aroma when burning or heating, which assembles that of cloves. As a Chinese traditional incense marker in my spare time, clove bark certainly fulfills my requirement for a potential ingredient. Owner of the plantation was confused when I asked for clove bark or mother-of-clove.

[144] Chen Cang Qi, *Ben Cao Shi Yi*, uoted in Tang Shenwei, *Chong Xiu Chong xiu Zhenghe jing shi zheng lei ben cao*, 12:309.

its hardness, and could be used to make the axle of chariot.[145] According to these characteristics, the ancient Chinese *tan* is probably *Pteroceltis tatarinowii* instead of rosewood that Schaffer claims.[146]

The word *zhan tan* was a new invention by Buddhist monks. Sandalwood is a very important aromatics in Buddhism. It is used to carve sculptures and was abundantly used in rituals and ceremonies. Sandalwood might be introduced to China either by foreign Buddhist missionaries, or by Chinese visiting Buddhist monks who encountered it during their voyages. Most early Chinese accounts of this aromatic wood were written by these Buddhist monk-travelers. Fa Xian saw the Buddha's pewter staff made of *Gosirsha Chandana* in a valley near the capital of Nagara. He transliterated it as "cow-head" sandalwood.[147] He also recorded a legend that the very first image of Buddha was carved from the *Gosirsha Chandana* wood.[148] In sixth century, an Indian Buddhist monk called Zhu Fa Zheng said "*zhan tan* is from foreign lands."[149] I-tsing observed that sandalwood paste was used to anoint the image in Indian monasteries, and recorded the process of preparation:

> The scent is prepared as follows: take any perfume-tree, such as sandalwood or aloeswood, and grind it with water on a flat stone until it becomes muddy, then anoint the image with it and next wash it with water.[150]

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[145]Xu Ding and Wang Chenlue, *Mao Shi Ming Wu Tu Shuo* (Beijing: Qing hua da xue chu ban she, 2006), 376.
[146] Schaffer. 4423, kindle. Schaffer mistakenly translated all tan mentioned in Chinese texts to rosewood, which causes great confusion.
[147] James Legge, *A record of Buddhistic kingdoms: being an account by the Chinese monk Fâ-hien of his travels in India and Ceylon (A.D. 399-414) in search of the Buddhist books of discipline* (Oxford: Clarendon Press, 1886), 39.
[148] ibid, 57; Legge quoted that Gosirsha Chandana represents a kind of copper brown sandalwood that is from a cow-head shape mountain of Ullarakuru (E.H. 42-43)
[149] Li Fang, *Tai Ping Yu Lan*, 982:648.
[150] Yi-ting, 149

As a result of their piety and sense of responsibility, Chinese Buddhist monk-travelers recorded sandalwood with great details and accuracy. They were well aware that the soft, aromatic sandalwood was not the hard, green-smooth-bark *tan* of China, so they only used the name *zhan tan* in order to avoid confusion and misidentification.

Started in seventh century CE, *bai tan* (white *tan*) and *tan hsiang* (aromatic *tan*) became new names for sandalwood. Usually *bai tan* is translated by modern scholars as "white sandalwood." It is not appropriate to translate without judging, because in some cases it may refer to other aromatic species from the Santalum family. In Xuanzang's account, *bai tan* (which he used *bai tan hsiang*) and *zhan tan* (which he used *zhan tan ni po*) were two physically resemble yet different trees, and the latter could only be identified by its attraction to snakes.[151] S. Dhammika states that sandalwood coexisting with serpents or dragons is a common theme in Sanskrit literature.[152] If Xuanzang's bai tan lacked this famous characteristic, it might not be sandalwood. Following his predecessors' tradition, he would write *bai zhan tan* if he wants to transliterate "white sandalwood," just like he used *chi zhan tan* (red sandalwood) in a latter chapter.[153]

In other cases, especially in the works of ancient herbalists and scholars, *bai tan* can be used to represent sandalwood, and could be literally understood as "white sandalwood". Here white means a light shade. Aromatic traders graded sandalwood by its shade, which ranges from light yellow to deep brown. Ibn Masawaih said the best should be "yellow, heavy, with no cavities, and dull as if it had been rubbed with saffron", and the second is "white in appearance", while the third is "yellow and red."[154] Never did a *huang tan* (yellow sandalwood) appear in Chinese texts.

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[151] Bianji, Ji Xianlin, and Xuanzang, *Da Tang Xiyu Ji Jiao Zhu*, 859-60
[152] S. Dhammika, natural and the environments in early buddhism, 85
[153] Bianji, Ji Xianlin, and Xuanzang, *Da Tang Xiyu Ji Jiao Zhu*, 904
[154] Martin Levey, "Ibn Masawaih and his treatise on simple Aromatic Substances: Studies in the History of Arabic Pharmacology", *Journal of the History of Medicine and Allied Science* 16, no.4 (1961), 403-404,

Probably because what Chinese called *zhan tan*, the sandalwood they experienced from the beginning, was Ibn Masawaih's yellow sandalwood. Therefore, when the second-grade white sandalwood came to Chinese market, people named it *bai tan* to distinguish from the yellow *zhan tan.*

Conclusion

In general, Chinese importation of foreign aromatics kept growing from the second century BCE to 10th century CE. Except Cao Cao's court, central governments of all imperial dynasties took efforts to encourage the aromatics importation. They secured maritime and overland trading routes through military forces. They sent envoys to establish trade with nations in Central Asia and Southeast Asia. The fact that aromatics' regions of origin were recorded in official chronicles suggests that foreign aromatics were important commodities in the eyes of Chinese emperors and rulers. In Tang dynasty, Emperor Taizong commanded his officers to precisely record imported aromatics. Emperor Gaozong (628-683 CE supported editing China's first official Materia Medica, *Xin Xiu Ben Cao*, in which foreign aromatics and medicines are systematically documented. These again demonstrated Chinese rulers' attention on foreign aromatics, thus result in a flourishing aromatic trade.

Spread of Buddhism also contributed greatly to the aromatic importation. Many foreign aromatics were probably first introduced to China by Indian and Central Asia Buddhist monks. Among the seven selected aromatics discussed in this paper, two of them have names initially transcribed from Sanskrit (*xunlu* and *zhan tan*), four of them can be found in journals written by Buddhist monks (*longnao hsiang*, *yujin hsiang*, *ding hsiang* and *zhan tan*), and all of them are used in Buddhist rituals. Out of their sense of responsibility, Chinese Buddhist monks recorded foreign aromatics in great details, leaving us rich and useful accounts. Since aromatics played a significant

role in Buddhist rituals, the continuing growth of Buddhism in China kept increasing people demand and importation of foreign aromatics.

BIBLIOGRAPHY

Primary Sources

Chinese Sources

Dynastic Histories and Political Texts

Ban Gu 班固. *Han Shu* 汉书 [Book of Han]. Beijing: Zhong hua shu ju, 1962.

Fan Ye 范晔. *Hou Han Shu* 后汉书 [Book of the Later Han]. Beijing: Zhong hua shu ju, 1965.

Chen Shou 陈寿. *San Guo Zhi* 三国志 [Records of the Three Kingdoms]. Beijing: Zhong hua shu ju, 1962.

Yao Silian 姚思廉. *Liang Shu* 梁书 [Book of Liang]. Beijing: Zhong hua shu ju, 1973.

Wei Shou 魏收. *Wei Shu* 魏书 [Book of Wei]. Beijing: Zhong hua shu ju, 1974.

Wei Zhen 魏徵. *Sui Shu* 隋书 [Book of Sui]. Beijing: Zhong hua shuju, 1997.

Li Yanshou 李延寿. *Nan Shi* 南史 [History of the Southern Dynasties]. Beijing: Zhong hua shuju, 1975.

Liu Xu 刘昫. *Jiu Tang Shu* 旧唐书 [Old Book of Tang]. Beijing: Zhong hua shuju, 1975.

Ouyang Xiu 欧阳修 and Song Qi 宋祁. *Xin Tang Shu* 新唐书 [New Book of Tang. Beijing: Zhong hua shu ju, 1975.

Dong'an Guo Wang Du Sa Bo Ti 東安國王篤薩波提. "*Yu Shi Biao* 論事表." *Quan Tang Wen* 全唐文. Edited by Dong Gao 董诰. Beijing: Zhong hua shu ju, 1983.

Wang Qinruo 王钦若. *Ce fu yuan gui: jiao ding ben* 册府元龟校订本. Nanjing: Feng huang chu ban she, 2006.

Materia Medica and Medical Texts

Chen Cang Qi 陈藏器, *Ben Cao Shi Yi* 本草拾遗. *Chong Xiu Chong xiu Zhenghe jing shi zheng lei ben cao* 重修政和经史证类备用本草. Edited by Tang Shenwei 唐慎微**.** Beijing: People's Medical Publishing House, 1957.

Li Xun 李珣, *Hai Yao Ben Cao* 海药本草, *Chong xiu Zhenghe jing shi zheng lei ben cao* 重修政和经史证类备用本草. Edited by Tang Shenwei 唐慎微**.** Beijing: People's Medical Publishing House, 1957.

Su gong 苏恭. *Xin Xiu Ben Cao* 新修本草. *Xin Bian Lei Yao Tu Zhu Ben Cao* 新编类要图注本草. Edited by Tang Shenwei 唐慎微**.** Manuscript, Imperial Household Agency: Archives and Mausolea Department, http://db.sido.keio.ac.jp/kanseki/T_bib_frame.php?id=006900
Wang Dao 王焘.*Wai Tai Mi Yao* 外臺秘要.
https://ctext.org/wiki.pl?if=gb&chapter=980102&remap=gb

Buddhist Texts

Bianji 辩机, Ji Xianlin 季羡林, and Xuanzang 玄奘. *Da Tang Xiyu Ji Jiao Zhu* 大唐西域记. Beijing: Zhonghua shu ju, 1985.

Fa Xian 法显.*A record of Buddhistic kingdoms: being an account by the Chinese monk Fâ-hien of his travels in India and Ceylon (A.D. 399-414) in search of the Buddhist books of discipline*. Translated by James Legge. Oxford: Clarendon Press, 1886.

Hui Chao 慧超 and Zhang Yi 张毅. *Wang Wu Tian zhu Guo Zhuan Jian Shi* 往五天竺國傳箋釋. Beijing: Zhong hua shu ju, 2000.

Hui Li 慧立. *A biography of the Tripiṭaka master of the great Ci'en Monastery of the great Tang dynasty*. Translated by Li Rongxi. Berkeley, California: Numata Center for Buddhist Translation and Research, 1995.

I-Tsing 义净. A Record of the Buddhist Religion as Practiced in India and the Malay Archipelago (A.D. 671-695). Translated by J. Takakusu. Oxford: The Clarendon Press, 1896.

I-Ting 义净 and Wang Weibang. *Da tang Xiyu Qiufa Gaoseng Zhuan Jiaozhu* 大唐西域求法高僧传校注. Beijing: Zhonghua Shuju, 1988.

Yu Fo Gong De jing 浴佛功德經*,* Translated by I-Tsing 义净, https://zh.wikisource.org/zh/浴佛功德經

Literary Texts

Bai Juyi 白居易. *Bai Hsiang Shan Shi Ji* 白香山文集. Manuscript. Zhongguo: Yun sheng tang, 1703. https://hdl.handle.net/2027/mdp.39015078165761

Chen Yuanliang 陈元靓. *Sui Shi Guang Ji* 岁时广记.
https://ctext.org/wiki.pl?if=gb&chapter=707497&remap=gb#p93

Duan Chengshi 段成式.*You Yang Za Zu* 酉阳杂俎. Manuscript. From the China-US Million Book Digital Library Project. https://archive.org/details/06047415.cn

Li Fang 李昉. *Tai Ping Yu Lan* 太平御览. Shanghai: Shanghai gu ji chu ban she, 2008.

Li Bai 李白. *Li Tai Bai Wen Ji* 李太白文集. Taipei: Shang wu yin shu guan, 1980.

Jia Sixie 贾思勰. *Qi Min Yao Shu* 齐民要术. Manuscript. From the China-US Million Book Digital Library Project. https://archive.org/details/06049859.cn/page/n74

Ouyang Xun 欧阳询, *Yi Wen Lei Ju* 艺文类聚 (Shanghai: Shanghai gu ji chu ban she, 1999

Qu Yuan 屈原 and Dong Chuping 董楚平. *Chu Ci* 楚辞. Shanghai: Shanghai gu ji chu ban she, 2006.

Xu Ding 徐鼎 and Wang Chenlue 王承略. *Mao Shi Ming Wu Tu Shuo* 毛诗名物图说. Beijing: Qing hua da xue chu ban she, 2006.

Zhang Bangji 张邦基. *Mo Zhuang Man Lu* 墨庄漫录. https://zh.wikisource.org/wiki/墨莊漫録

Zhou Jiazhou 周嘉胄, *Hsiang cheng* 香乘, Manuscript, Book 13.

Archaeological Reports

Guangzhou Shi wen wu guan li wei yuan hui 广州市文物管理局委员会 and Guangzhou Shi Bo Wu Guan 广州市博物馆. *Guangzhou Han Mu* 广州汉墓. Beijing: wenwu chubanshe, 1981.

Guangzhou Shi wen wu guan li wei yuan hui 广州市文物管理局委员会, Zhongguo she hui ke xue yuan 中国社会科学院, and Guangdong Sheng bo wu guan 广东省博物馆. *Xi Han Nanyue wang mu* 西汉南越王墓. Beijing: Wen wu chu ban she, 1991.

Arabian and Greek Sources

Abū Zayd al-Sīrāfī. “Accounts of China and India.” *Arabic Classical Accounts of India & China*, Edited by S. Maqeul Ahmad. Shimla: Indian Institute of Advanced Study, 1989.

ibn Khordadbeh, “Kitāb al-Masālik w’al- Mamālik,” in *Arabic Classical Accounts of India & China*. Edited by S. Maqeul Ahmad. Shimla: Indian Institute of Advanced Study, 1989.

The Periplus of the Erythraean Sea: *Travel and Trade in the Indian Ocean by a Merchant of the First Century*, trans. Wilfred H. Schoff (New York: Longmans, Green, and Co., 1912)

Secondary Sources

A.F.L. Beeston. “The Arabian Aromatics Trade in Antiquity.” *Proceeding of the Seminar for Arabian Studies* (2005): 53-64

Chen, Dong-Jie 陈东杰 and Li Ya 李芽. “Interpreting the Customs of Using Spice in the Han Dynasty from the Spice and Its Containers Unearthed from Tomb No. 1 of the Han Dynasty at Ma wangdui 从马王堆一号汉墓出土香料与香具探析汉代用香习俗.” *Academic Forum of Nandu (Journal of the Humanities and Social Sociences)* 29, no.1 (2009): 6-12

Chen, Ming 陈明. “Yi Shi yu Chuan Chao: Si Lu Han Wen Mi Jiao Zhong de Wai Lai Wen Wu 译释与传抄 :丝路汉文密教文献中的外来药物书写.” *Studies in World Religions*, no.1 (2016)：28-49。

Dalby, Andrew. *Dangerous Tastes: the story of spices* (Los Angeles: University of California Press, 2000

Dong, Shuyan 董淑燕. “Tang Song Shi Qi de Xiang Ju he Fo Shi 唐宋时期的香具和佛事. ” *Xiang yuan yi qing: Tang Song Xiangju Lan Cui* 香远益清：唐宋香具览粹. Edited by Dong, Shuyan 董淑燕 and Li, Shuxin 黎毓馨. Beijing: Zhong guo shu dian, 2015

Hansen, Valerie. *The Silk Road: A New History with Documents*. New York: Oxford University Press, 2017.

Howes, F. N. "Age-Old Resins of the Mediterranean Region and Their Uses." *Economic Botany* 4, no. 4 (1950): 307-16.

Jiang, Boqin 姜伯勤 *Dunhuang Tulufan Wenshu yu Sichou Zhi Lu* 敦煌吐鲁番文书与丝绸之路. Beijing: Wen wu Chu ban she, 1994.

Laufer, Berthold. "SINO-IRANICA: Chinese Contributions to the History of Civilization in Ancient Iran." *Publications of the Field Museum of Natural History. Anthropological Series* 15, no. 3 (1919): 185-597, 599-630.

Liu, Xiwei 刘希为. *Sui Tang Jiaotong* 隋唐交通. Taipei: Xin wen feng chu ban she, 1992.

Liu, Yingsheng 刘迎胜. *Si Chou Zhi Lu* 丝绸之路. Nanjing: Jiangsu ren min chu ban she, 2014.

Levey, Martin. “Ibn Masawaih and his treatise on simple Aromatic Substances: Studies in the History of Arabic Pharmacology.” *Journal of the History of Medicine and Allied Science* 16, no.4 (1961): 394-410.

Miller, James Innes. *The spice trade of the Roman Empire, 29 B.C. to A.D. 641.* Oxford: Clarendon Press, 1969.

Ran, Wanli 冉万里. “Tang Dai Jin Shu Xiang Lu Yan Jiu 唐代金属香炉研究.” *Wenbo* no. 2 (2000): 13-23.

Rao, C. Hayavadana. "Indian Ceremonial Baths." *Anthropos* 12/13, no. 1/2 (1917): 84-88.

Sastry, V. V. S. “History of Guggulu Based on Ayurvedic Literature,” *Bulletin of the Indian Institute of History of Medicine* 6, no.2 (1976):102-116.

Schoff, Wilfred H. "Camphor." *Journal of the American Oriental Society* 42 (1922): 355-370.

Schafer, Edward H. *The Golden Peaches of Samarkand: A Study of T’ang Exotics*. Pickle Partners Publishing, 2016. Kindle.

Sun, Ji 孙机. *Handai Wuzhi Wenhua* 汉代物质文化. Beijing: Wen wu chu ban she, 1991.

Etienme de la Vaissiere. *Sogdian Traders: A History*. Translated by James Ward. Leiden: Brill, 2005.

Wang Yingzhu 王颖竹. “Lue Lun Qin Han zhi Liang Song Shiqi de *Wenwu* 略论秦汉至两宋时期的香料, no.5 (2013): 70-76.

Zhang Changyan 张嫦艳 and Yan Hao 颜浩. *“*Wei Jin Nan Bei Chao de Hai Shang Si Chou Zhi Lu Ji Dui Wai Maoyi de Fazhan 魏晋南北朝的海上丝绸之路及对外贸易的发展. *Cangsang* no.5 (2008): 19-21

Zhang Xiancheng 张显成. “The Annotated Research on "Xun du", "Xun li" As Seen in Excavation of the Remains of Western Han dynasty 西汉遗址发掘所见“薰毒”、“薰力”考释. ” *Chinese Journal of Medical History* no.4 (2001): 207-209.

Zhang Xinglang 张星烺. *Zhong xi jiao tong shi liao hui bian* 中西交通史料汇编. Beijing: Zhonghua Shuju, 2003.

Zhang Xun 章巽. *Wo Guo Gu Dai Hai Shang Jiao Tong* 我国古代的海上交通. Beijing: Shang wu yin shu guan, 1986.