

Types of Paper in 14th–15th Century Egypt: Standard Criteria and Classifications

Hassan Ebeid ¹

Lecturer, Luxor Faculty of Archaeology, South Valley University, Egypt

Abstract

Paper is known to have been in use in Egypt by the ninth century and was manufactured there by the tenth century. However, during that time and in subsequent centuries many other types of non-Egyptian paper were imported from abroad due to their quality. This research investigates the standard criteria used for the assessment of the quality of types of paper available on the Egyptian market during the 14th and 15th centuries AD (8th-9th centuries AH). The study combines a literature review and interpretative analysis, including of primary historical sources. Three types of Islamic paper and one European type are found to have been available in Egypt during the period considered. These types are classified and categorized based on size and quality according to the criteria used at that time. A previously unknown brand of Egyptian paper is described, which has four classes.

Keywords

Egypt; Types of paper; Islamic paper; Classifications of paper; al-Qalqashandi; 14th century; 15th century; Baghdad paper; Syrian paper; Egyptian paper; European paper

أنواع الورق في مصر في القرنين (٨-٩هـ / ١٤-١٥م): المعايير القياسية والتصنيفات

حسن علي حسن عبيد

مدرس بكلية الآثار بالأقصر، جامعة جنوب الوادي، مصر

المخلص:

استُخدم الورق في مصر بدءاً من القرن الثالث الهجري/ التاسع الميلادي، وتم تصنيعه في القرن الرابع الهجري/ العاشر الميلادي، ومُنذ ذلك الوقت وفي العصور التالية عرفت مصر أنواع عديدة من الورق المصري وغير المصري، والتي تم استيرادها من الخارج لجودتها العالية. وتهدف هذه الورقة البحثية إلى التعريف بأنواع الورق المختلفة والموجودة بالسوق المصري، وكذلك المعايير القياسية المستخدمة لتقييم جودة الورق، وذلك خلال القرنين الثامن والتاسع الهجريين/ الرابع عشر والخامس عشر الميلاديين، وذلك اعتماداً على مصادر تاريخية أولية على سبيل المثال صبح الأعشى في صناعة الإنشا للقلقشندي ... وغيره من تلك الفترة. وقد خلُصت الدراسة إلى وجود أربعة أنواع رئيسية من الورق في السوق المصري خلال فترة الدراسة: منها ثلاثة أنواع من الورق الإسلامي (البغدادي، الشامي أو السوري، المصري)، والتي حوت بدورها على بعض الأصناف الفرعية بداخلها، ونوع ورق رابع يُعرف بالورق الأوربي. هذا وقد تم تصنيف هذه الأنواع الأربعة وأصنافها الفرعية على أساس الحجم والجودة بشكل رئيسي، وذلك وفقاً للمعايير القياسية المستخدمة في تلك الفترة.

الكلمات الدالة:

صناعة الورق - الورق الإسلامي - تصنيفات الورق - الورق البغدادي - الورق الشامي - الورق المصري - الورق الأوربي.

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¹ Correspondence Author: h.ebeid@arch.svu.edu.eg

Introduction:

Paper was introduced into the Islamic world from China for the first time in 751 AD in Samarqand¹, and the craft of papermaking then spread rapidly through Iraq, the Levant, Egypt, Morocco, Muslim Spain and Persia, being transformed from a limited craft activity into a mass production industry². Cities such as Samarqand, Baghdad, Damascus and Cairo became the main centres of manufacturing and were famous for their branded paper³ (see Figure 1).

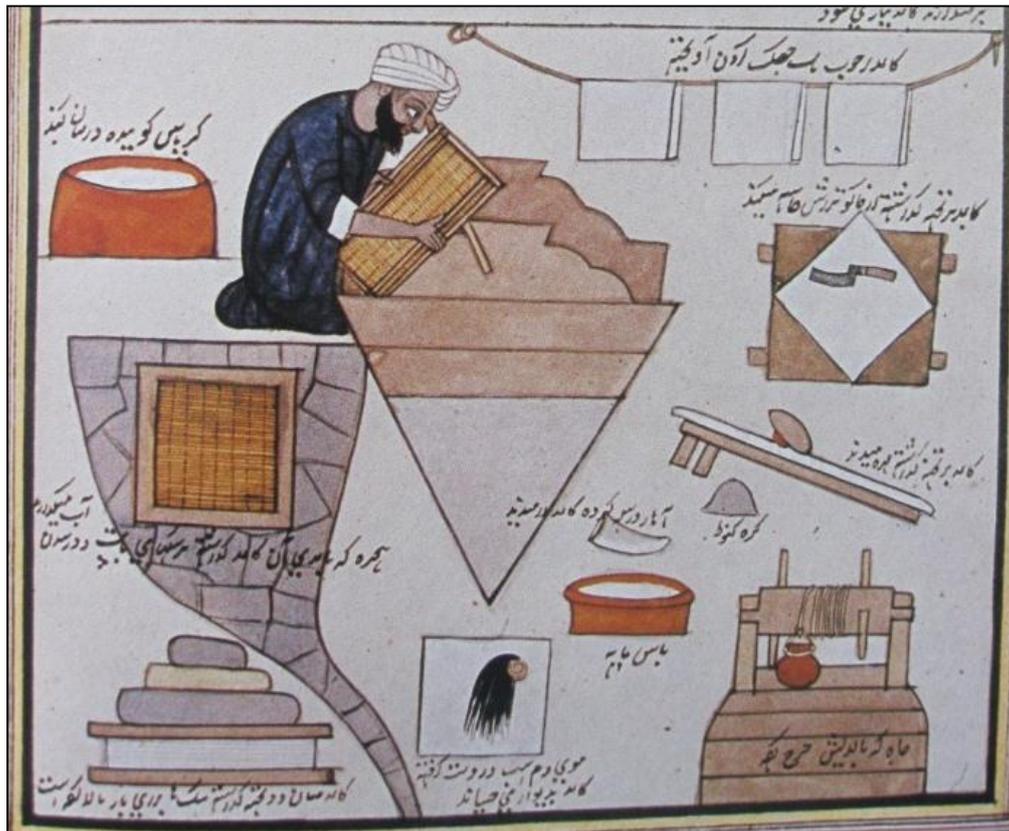


Figure 1 A scene of a papermaker and his tools, from a Kashmiri manuscript illustrating traditional crafts and trades (between 1850 – 1860 AD)⁴.

Paper was introduced into Egypt from Syria by the time of the 9th century AD/³rd century AH⁵; however, its use was limited to high-ranking people, while the common people

¹ Abd al-Malik al-Tha'libī, *Laṭā'if al-Ma'ārif (The Book of Curious and Entertaining Information)* (Leiden: Brill, 1867), 126, and Xinru Liu, “The Silk Road: Overland Trade and Cultural Interactions in Eurasia”, in *Essays on Global and Comparative History*, ed. Michael Adas (Washington DC: American Historical Association, 1998), 22.

² Ahmed al-Hassan, *Transfer of Islamic Technology to the West* (Manchester: Foundation for Science and Civilisation (FSTC), 625, 2006), 26.

³ Ayman Fu'ād Sayyid, *al-Kitāb al-'Arabī al-makḥūṭ wa-'ilm al-makḥūṭāt (Arabic Book Manuscript and Codicology)* (Cairo: al-Dār al-Miṣrīyah al-Lubnānīyah, 1997), 23-31, and Joseph von Karabacek, *Arab Paper* (London: Archetype Publications Ltd., 2001), 26-33, and Jonathan Bloom, *Paper Before Print: the History and Impact of Paper in the Islamic World* (London: Yale University Press, 2001), 46-89.

⁴ Bosch, G. and Petherbridge, G., 'The Materials, Techniques and Structures of Islamic Bookmaking', in Gulnar Bosch, John Carswell, and Guy Petherbridge (eds.), *Islamic Bindings and Bookmaking: A Catalogue of an Exhibition* (Chicago: The Oriental Institute, University of Chicago, 1981), 20.

⁵ Helen Loveday, *Islamic Paper: A Study of the Ancient Craft* (London: The Don Baker Memorial Fund, 2001), 20.

still used papyrus¹. For example, in his book *Mu'jam al-Udabā'* (Dictionary of Writers), it was reported by Yaqut al-Hamawi (1179–1229 AD/574–622 AH), an Islamic biographer and geographer, that Samarqand paper was carried to the Egyptian Vizier Abi al-Fadl (917–1000 AD/308–391 AH) every year to be used by his scribes².

Furthermore, paper was probably manufactured in Egypt by the 10th century AD/4th century AH³. However, during that time and for several centuries afterwards, many other types of non-domestic paper were imported from abroad for their quality, whether for local use or commercial re-exportation or redistribution to other countries. For example, Damascene paper was exported to Egypt from the 10th century AD/4th century AH⁴ and, according to the Geniza documents, in great quantities during the 11th century AD/5th century AH in particular, as it was the type most in demand for its high quality at that time, and was transported both by sea via Tyre, and by land via camel caravans⁵.

For several centuries, paper had also been mentioned by many scholars, which can be considered as a sign of its wide use. For example, the Persian poet, scholar and traveller Nasir Khusraw (1004–1088 AD/395–480 AH) mentioned to a domestic Egyptian wrapping paper in his famous book *Safarnama* (The Book of Travels)⁶ during his visit to Egypt in 1047 AD/439 AH. Abd al-Latif al-Baghdadi (1162–1231 AD/557–629 AH), the Baghdad-born physician, historian and traveller, also noted during his visit to Egypt by the end of the 12th century AD/the 6th century AH a domestic Egyptian wrapping paper produced from mummy wrappings⁷. Ibn Sa'id al-Andalusi (1213–1286 AD/609–684 AH), the geographer and historian from Muslim Spain, reported during his visit to Egypt in the 1240s that paper factories were located in the area of al-Fustat, a suburb in the southern part of Cairo on the east bank of the Nile, where a brand of Egyptian paper, *al-Manşuri* paper, was made⁸. This information was corroborated during the 14th–15th century AD /8th–9th century AH by the Egyptian historian al-Maqrizi (1364–1442 AD/764–845 AH)⁹. Finally, al-Qalqashandi (1356–1418 AD/756–820 AH)¹⁰ described all of the types and classes of Egyptian and non-Egyptian paper on the Egyptian market during his time.

However, among the above-mentioned scholars, only al-Qalqashandi provided detailed

¹ Abdel-Sattar El-Halwagi, *al-Mĥtūṭ al-Arabī (The Arabic Manuscript)* (Jeddah: Musbah Bookshop, 1989), 29.

² Yaqut al-Hamawi, *Mu'jam al-Udabā' (The Dictionary of Writers)*, ed. Ihsan Abass (Beirut: Dar al-Garb al-Islami, 1993), 787.

³ Jonathan Bloom, *Paper Before Print: the History and Impact of Paper in the Islamic World*, p. 74, and Helen Loveday, *Islamic Paper: A Study of the Ancient Craft*, p. 20.

⁴ Joseph von Karabacek, *Arab Paper*, p.52.

⁵ Shelomo Dov Goitein, *A Mediterranean Society: The Jewish Communities of the Arab World as Portrayed in the Documents of the Cairo Geniza, Volume 1: Economic Foundations* (Berkeley: University of California Press, 1967), 81.

⁶ Nasir Khusraw, *Safarnama (The Book of Travels)*, trans. Yahya el-Khashab (Cairo: General Egyptian Book Authority, 1993), 120.

⁷ Abd al-Latif al-Baghdadi, *Kitab al-Ifada wa al-I'ateabar fi al-'Omoor al-Moşahada wa al-Hawadī al-Mo'ayana fi Ard Mişr (The Trip of Abd al-Latif al-Baghdadi to Egypt)* (Cairo: General Egyptian Book Authority, 1998), 108.

⁸ Ibn Sa'id al-Andalusi, *al-Nuġūm al-Zahira Fī Haḍrāt Huliyi al-Qahira (The Description of Cairo)*, ed. Husain Nassar (Cairo: Markaz Tahqiq al-Turath, Ministry of Culture, 1970), 29.

⁹ Ahmed al-Maqrizi, *al-Mawa'iz wa'l-i'tibar fi Dīkr al-Ĥiṭaṭ wa'l-āṭār (The Planning of Egypt, Nile and Cairo and its Monuments)* (Cairo: Bulaq, 1853), 367.

¹⁰ Ahmed al-Qalqashandi, *Şubḥ al-A'şā fi Şena't al-Inşā (The Dawn for the Blind in the Art of Writing)*, Volume Two, ed. Mohamed Abel-Rasul Ibrahim (Cairo: Dar Al-Kuttub El -Khedawia, 1913), 476-477.

information, including not only a complete survey of all types of paper available on the Egyptian market, but also technical and historical knowledge about the standard criteria used for the assessment of its quality. This makes him the main source of information in the present research. Since, there is a lack of information regarding the types of paper used during the Islamic mediaeval era and the technical differences between them, this work seeks to address these significant gaps, and will contribute novel information from previously un-translated Islamic treatise. Furthermore, the findings will inform conservation and preservation practices and help historians to learn more about the characteristics of these historical types of paper.

Method

The main original source for this research from which information has been gathered is an Arabic treatise which describes the available paper on the Egyptian market during the 14th to 15th centuries AD/8th to 9th centuries AH. It also explains the types, characteristics and classifications of the papers in use during the Islamic mediaeval era according to the specific criteria used for assessment at that time.

This treatise is by al-Qalqashandi (1356–1418 AD/756-821 AH), who was a 14th-15th century AD/8th-9th century AH Egyptian state scribe in the Mamluk chancery in Cairo. He wrote the extensive and well-organized encyclopaedia *Ṣubḥ al-Ashā fi Sena't al-Inshā* (The Dawn for the Blind in the Art of Writing)¹, which contained an introduction and ten essays covering data collected from an enormous diversity of sources from all sorts of disciplines, ranging from geography and history to grammar books and from manuals on jurisprudence to commentaries, and from botany and zoology to cosmology and ethics².

This massive encyclopaedia edited and printed for the first time in fourteen volumes and nearly seven thousand pages from 1913 to 1919 AD in Cairo, was used in this research. This edition was also reprinted in 2004 by the Ministry of Culture in Egypt, after having been edited and printed again in 1987 in Beirut in its fourteen volumes. Since that time, it has been extensively used by many scholars as it covers disciplines, topics and subjects; however, none of the historical and descriptive information from this historical source introduced and discussed in this research has been translated into or published in English before and, moreover, it can be considered to represent a primary text with regard to the art of writing and Islamic paper.

Standard Criteria

In the Islamic mediaeval era in Egypt, and from the 14th to the 15th centuries AD (8th-9th centuries AH) in particular, various standards were used for judging the quality of paper on the market, and these determined its price and use at that time. These standards and characteristics were identified using the text by al-Qalqashandi. In a section in his encyclopaedia for young scribes in the governmental bureaucracy, he reported in 1412 AD/814 AH that the characteristics of good paper, stemming from his personal opinion as an experienced scribe, were as follows³:

¹ Khair El-Din al-Zerkly, *al-'Alaam (Celebrities or Famous People)*, Volume one (Beirut: Dar El-Elm Llmalain, 1980), 177.

² Maaïke Van Berkel, "al-Qalqashandi", in *Essays in Arabic Literary Biography II: 1350-1850*, eds. Joseph E. Lowry and Devin J. Stewart (Wiesbaden: Otto Harrassowitz Verlag, 2009), 337.

³ Ahmed al-Qalqashandi, *Ṣubḥ al-A 'šā fi Sena't al-Inšā*, Vol. 2, 476.

“The best paper is that which shines white, has heavy filling [with pulp], symmetrical dimensions, and is durable over time.”

According to this description, al-Qalqashandi included four criteria in his conception to the definition of good paper: the degrees of whiteness, thickness, symmetry of dimensions, and durability over time. These four characteristics of paper would determine its quality, type, price and then its use as well.

Thickness can be understood from the description of ‘heavy filling’, which means that the mould was filled with pulp or fibres, and that would be reflected in the final thickness of the paper sheet. For two of the other criteria, symmetrical dimensions and durability over time, the author did not include further explanation regarding his understanding of their characteristics. Moreover, al-Qalqashandi added the further criterion of the size of the paper, and this was the main factor he used to classify the types of paper on the market in addition to the previously explained factors.

Classification

Four types of paper were existed on the market during the 14th and 15th centuries AD (8th-9th centuries AH) in Egypt. Among them, three were imported and one local and, these types each have various brands and classes. The four types were classified and categorised by al-Qalqashandi according to his criteria of size, whiteness, thickness, the symmetry of dimensions, and the durability over time of the paper. These types are Baghdad paper, Syrian paper, Egyptian paper and European paper¹ (see Figure 2).

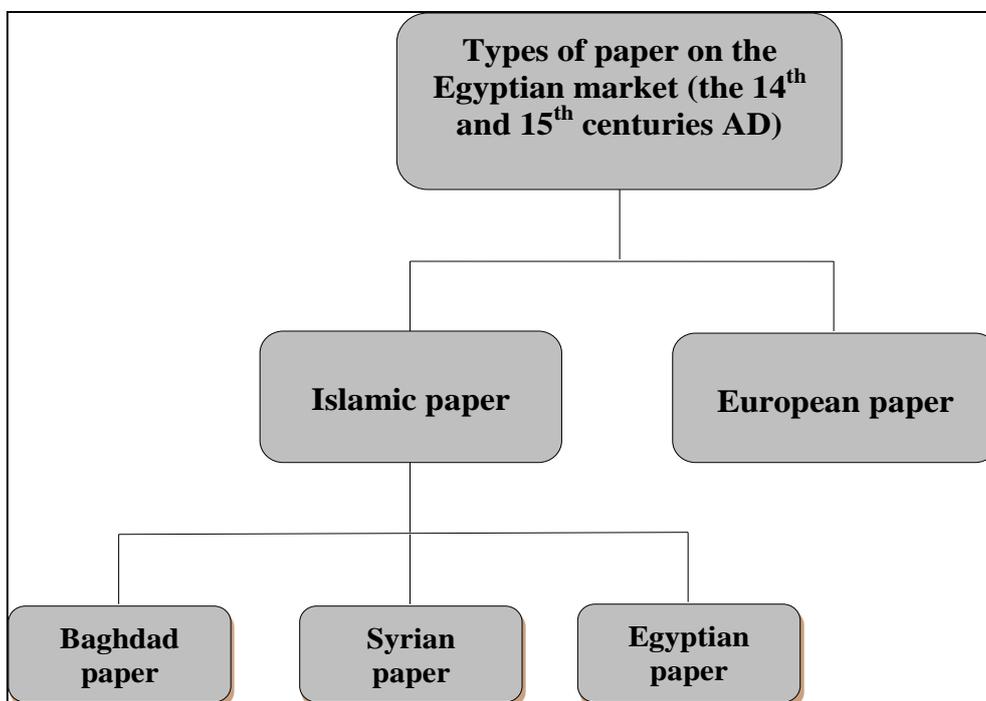


Figure 2 Types of paper on the Egyptian market during the 14th and 15th centuries AD according to the Egyptian scribe al-Qalqashandi (1356–1418 AD/756-820 AH).

¹ Ahmed al-Qalqashandi, *Ṣubḥ al-A‘šā fi Ṣena’t al-Inšā*, Vol. 2, 476-7

Baghdad Paper

This paper is known in historical Arabic sources as ‘*al-Wārāq al-Baghdadi*’, meaning paper made in Baghdad. Over the 14th and 15th centuries AD/8th and 9th centuries AH, al-Qalqashandi judged this the highest quality paper available during his time. According to his criteria for assessing paper, he reported that¹:

“The top paper as we [al-Qalqashandi] see it is ‘al-Baghdadi’ [Baghdad paper]; it is a thick paper with flexibility, fine edges and symmetrical dimensions. Its sheet [size] is very large, and mostly only the Holy Quran is written on it. Probably, Kuttāb al-Inshā² [scribes in the dispatch bureau] use it in correspondence with al-Qanate [great kingdoms] and the like, as it would be explained in [under the section of] the Sultanate Correspondence.”

This text shows that Baghdad paper was the best paper on the market at that time due to its thickness, flexibility, symmetrical dimensions, and size. It was almost exclusively used for the manufacturing of oversize Quran copies; in other words, the best paper product on the market was used for the most precious book in the Islamic world. This was not necessarily because this type of paper was rare at that time, as Bloom has suggested³. Moreover, these were very large sheets and the uncut sheets straight from the mill measured 109.9 × 73.329 cm for a whole sheet and 73.329 × 48.8 cm for a half sheet according to al-Qalqashandi and Karabacek⁴. They were used to produce giant copies of the Quran normally funded by sultans and rich people during the Mamluk period (1250-1517 AD/647-922 AH) in particular, which were then presented as endorsements to religious foundations⁵.

Syrian Paper

This paper is known in historical Arabic sources as ‘*al-Wārāq al-Shāmī*’, meaning that the paper was produced in the cities of Damascus, Tripoli, Tiberias, and Hama. al-Qalqashandi also described Syrian paper in his text, ranking it second after Baghdad paper according to quality and size, as follows⁶:

“..., and less than it [Baghdad paper] in rank is al-Shāmī [Syrian paper], which is of two types: [the first] type is known as al-Ḥāmāwī [Hama paper], which is less in qat’ [size] than al-Baghdadi [Baghdad paper]. And less than it [Hama paper] in rank is that

¹ Ahmed al-Qalqashandi, *Ṣubḥ al-A ‘šā fi Ṣena’t al-Inšā*, Vol. 2, 476.

² A group of scribes in an office responsible for correspondence, archiving and copying in the chancery, these were secretaries in the dispatch bureau for the sultan, usually working under the supervision of the chief scribe.

³ Jonathan Bloom, *Paper before Print: the History and Impact of Paper in the Islamic World*, 53.

⁴ Ahmed al-Qalqashandi, *Ṣubḥ al-A ‘šā fi Ṣena’t al-Inšā (The Dawn for the Blind in the Art of Writing)*, Volume Six, ed. Mohamed Abel-Rasul Ibrahim (Cairo: Dar Al-Kuttub El –Khedawia, 1915), 190, and Joseph von Karabacek, *Arab Paper*, 44-5.

⁵ David James, “Some Observations on the Calligrapher and Illuminators of the Koran of Rukn al-Dīn Baybars al-Jāshnagīr”, *Muqarnas*, Vol. 2, The Art of the Mamluks (1984): 147-157, and Barbara Brend, *Islamic Art* (London: British Museum Press, 1991), 117.

⁶ Ahmed al-Qalqashandi, *Ṣubḥ al-A ‘šā fi Ṣena’t al-Inšā*, Vol. 2, 476.

known as *al-Shāmī* [Damascene paper], and its *qat'* [the size of Damascene paper] is less than *al-Ḥāmāwī* [Hama Paper].”

This text shows that there were two types of ‘Syrian paper’ in use in Egypt during the 14th and 15th centuries AD/8th-9th centuries AH, differing in size and quality. Firstly, the name of the paper known as *al-Ḥāmāwī* clearly refers to its production in the city of Hama; moreover, its size is smaller than the paper of Baghdad. The second type is smaller than that of the city of Hama and is known as *al-Shāmī* (Damascene paper), which clearly also refers to its production in the city of Damascus since this city was and is still known by Syrian people as *al-Shām*. What is more, this is also the same paper that had been known as *Charta Damascena* in Europe since the 10th century AD/4th century AH¹; and it was also referred to as *al-Shāmī* or *Dimashqī* in traders’ requests to import this paper into Egypt, according to the Geniza documents during the 11th century AD/5th century AH².

It is really interesting that Hama paper was judged the superior types of Syrian papers compared to the internationally famous brand of Damascene paper during the 14th to 15th centuries AD/8th to 9th centuries AH. In his book *Aḥsan al-Taḳāsim fī Maʿrifat al-Aqālīm* (The Best Divisions in the Knowledge of the Regions), al-Muḳḏasi (947–991 AD/336-380 AH), a mediaeval Jerusalem-born geographer, did not mention paper as one of the products of Hama city, however, he did mention that paper was produced in Damascus and Tiberias in Palestine³. Furthermore, in his famous book *Safarnama* (The Book of Travels), Nasir Khusruw (1004-1088 AD/395-480 AH) also mentioned that paper was a product of Tripoli; which he visited in 1047 AD/438 AH but he also did not mention paper as a product of Hama city⁴. Presumably, if there was papermaking activity in this city at that time, Hama paper was not considered good enough to be mentioned.

Moreover, Hama paper may also not have been known, at least in the Egyptian market during the 11th century AD/5th century AH, since according to the Geniza documents requests by traders for imported Syrian paper were only for Damascus paper⁵. Presumably, if there was a paper industry in Hama at that time, its products were not achieved a standard or considered good enough for export to Egypt. What is more, it seems that the papermaking industry flourished and became well-developed during the 12th and the 13th centuries AD/6th and 7th centuries AH, and al-Qalqashandi’s report could be the first citation of the existence of Hama paper in the Egyptian paper market.

In a different volume of the encyclopaedia, al-Qalqashandi came across another brand of Damascus paper that he did not add to his list. This brand was called ‘*Wārāq al-Ṭair*’ (bird paper), Al-Qalqashandi described this paper in a separate text, under a section entitled ‘SIZES OF PAPER IN OUR TIME’ describing paper found in the Egyptian chancery, and ranking it ninth in order and the last in the list according to size, as follows⁶:

¹ Joseph von Karabacek, *Arab Paper*, 52.

² Shelomo Dov Goitein, *A Mediterranean Society*, 410.

³ Mohamed al-Muḳḏasi, *Aḥsan al-Taḳāsim fī Maʿrifat al-Aqālīm* (The Best Divisions in the Knowledge of the Regions) (Cairo: Madbooli Library Press, 1991), 180-1

⁴ Nasir Khusruw, *Safarnama (The Book of Travels)*, 58.

⁵ Shelomo Dov Goitein, *A Mediterranean Society*, 410.

⁶ Ahmed al-Qalqashandi, *Ṣubḥ al-Aʿšā fī Ṣenaʿt al-Inšāʿ*, Vol. 6, 192.

“The ninth measure [of paper] - the small size: it is in a width of three fingers jointly-held together of the paper known as *Wārāq al- Ṭair* [bird paper], it is a brand of *al-Wārāq al-Shāmī* [Damascene paper] that is extremely thin. And on it, tiny (small or light) books, and messages for pigeons [carrier pigeons] are written.”

The text shows that this paper was about seven centimetres in width, very fine and thin, produced in Damascus, and used for two main purposes: the writing of very small books and messages carried by pigeons.

The existence of two different types of Syrian paper, Hama paper and Damascus paper, with the last having two brands, Damascene paper and bird paper, on the Egyptian paper market indicate that the industry of papermaking was very well-developed in Syria at the time of al-Qalqashandi over the 14th and the 15th centuries AD/8th and 9th centuries AH (see Figure 3).

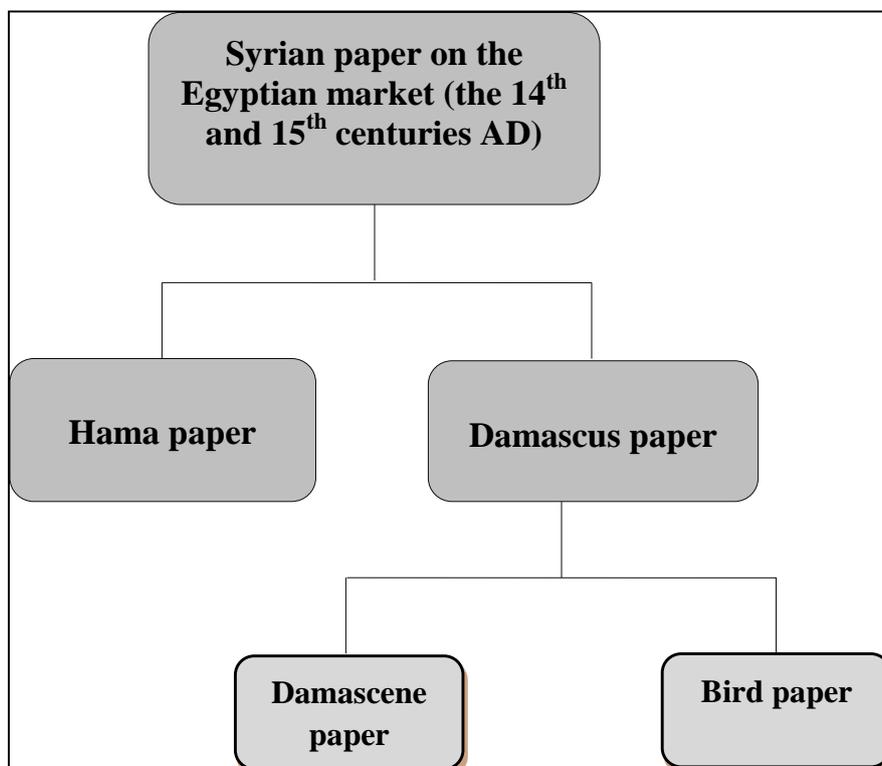


Figure 3 Types and brands of Syrian paper on the Egyptian paper market during the 14th and 15th centuries according to the Egyptian scribe al-Qalqashandi (1356–1418 AD/756-820 AH).

Egyptian Paper

This paper is known in historical Arabic sources as ‘*al-Wārāq al-Miṣri*’, meaning paper produced in Egypt. Al-Qalqashandi (1356–1418 AD/756-820 AH), described the types and classes of Egyptian papers on the Egyptian market in his time as follows¹:

“..., and less than them [Bagdad paper and Syrian paper] in rank is *al-Wārāq al-Miṣri* [Egyptian paper], which is also of two sizes: *al-Manṣuri qat* [al-Manṣuri size], and

¹ Ahmed al-Qalqashandi, *Ṣubḥ al-A ‘šā fi Ṣena’t al-Inšā*, Vol. 2, 476-7.

normal qat' [normal size], and al-Manşuri [paper] is bigger and rarely polished on both sides. For 'Normal' paper; both of its sides are polished, and it is called by papermakers (or paper traders) as al-Maşlūh [prepared]. And in it [normal paper] is in two classes; High and Medium. And in it [normal paper] is also a class known as al-Fūwwi."

So, at that time, there were two main brands of Egyptian paper distinguished according to size and polishing: *al-Manşuri* paper and normal paper (see Figure 3). According to this description, the best brand of Egyptian paper on the market was *al-Manşuri* paper, characterized as large and polished on one side.

al-Manşuri paper was also known as *al-Kamel* (complete or perfect), and was probably named after the Fatimid Caliph al-Manşur (1102-1130 AD/495-524 AH). Moreover, the paper was very strong with a width of 48.886 cm and length of 73.329 cm and was available in five different sizes (full sheet, two-thirds sheet, one-third sheet, quarter-sheet and one-sixth sheet). The use of different sizes depended on who was writing, with the Caliph, amirs, superintendents and secretaries, merchants and mathematicians using specific paper sizes¹.

The second brand of Egyptian paper was known as 'normal paper', which was available in four different classes arranged according to their quality as follows: The best class of normal paper was *al-Maşlūh* (prepared) and it was characterized as sized and polished on both sides. The second class was known as *High*, the third as *Medium*, and the other as *al-Fūwwi* (see Figure4).

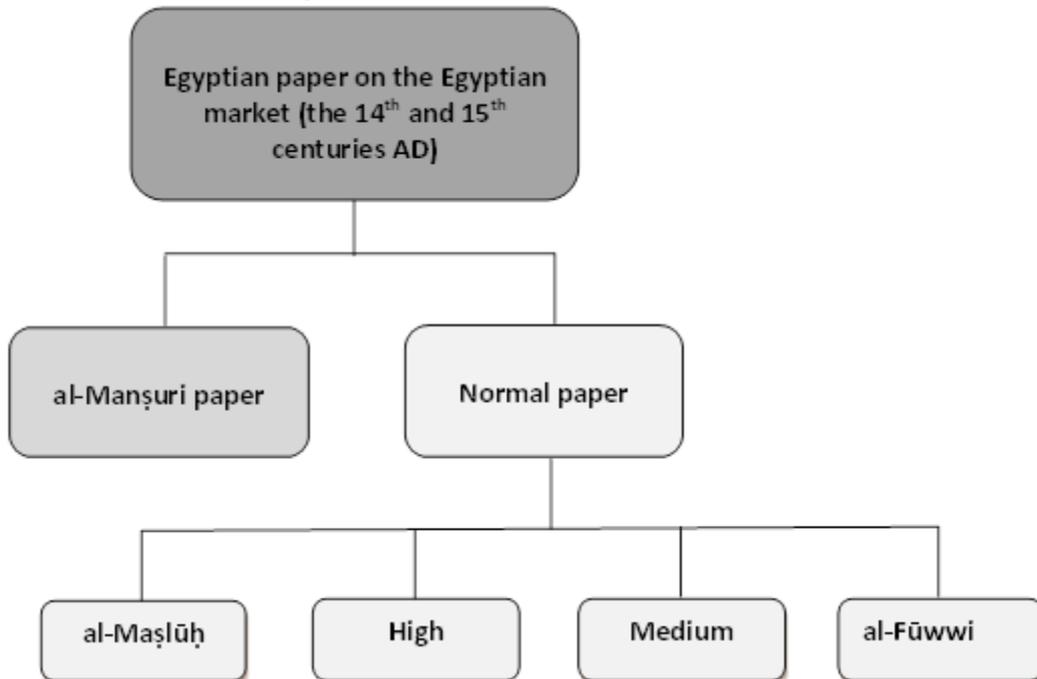


Figure 4 The brands and classes of Egyptian paper on the market during the 14th and 15th centuries according to the Egyptian scribe al-Qalqashandi (1356-1418 AD/756-820 AH).

¹ Joseph von Karabacek, *Arab Paper*, .53

Regarding the geographical location of the production of these brands and classes of paper, al-Manṣuri paper was produced in factories located in the south of Cairo, as reported by Ibn Sa'id al-Andalusi and al-Maqrizi during the 13th and 14th centuries respectively¹. However, it is still unknown whether these factories produced other types of paper, or if they exclusively made this brand. Of the four classes of normal paper, there is no referral regarding the sites of the production of 'al-Maṣlūḥ', 'High', and 'Medium'. The name of the last class of normal paper, 'al-Fuwwi', indicates that this paper was produced in the city of 'Fuwwah', which is located along the eastern bank of the western tributary of the Nile (Rosetta branch) in the Nile Delta, about 170 km north-west of Cairo (see Figure 5).

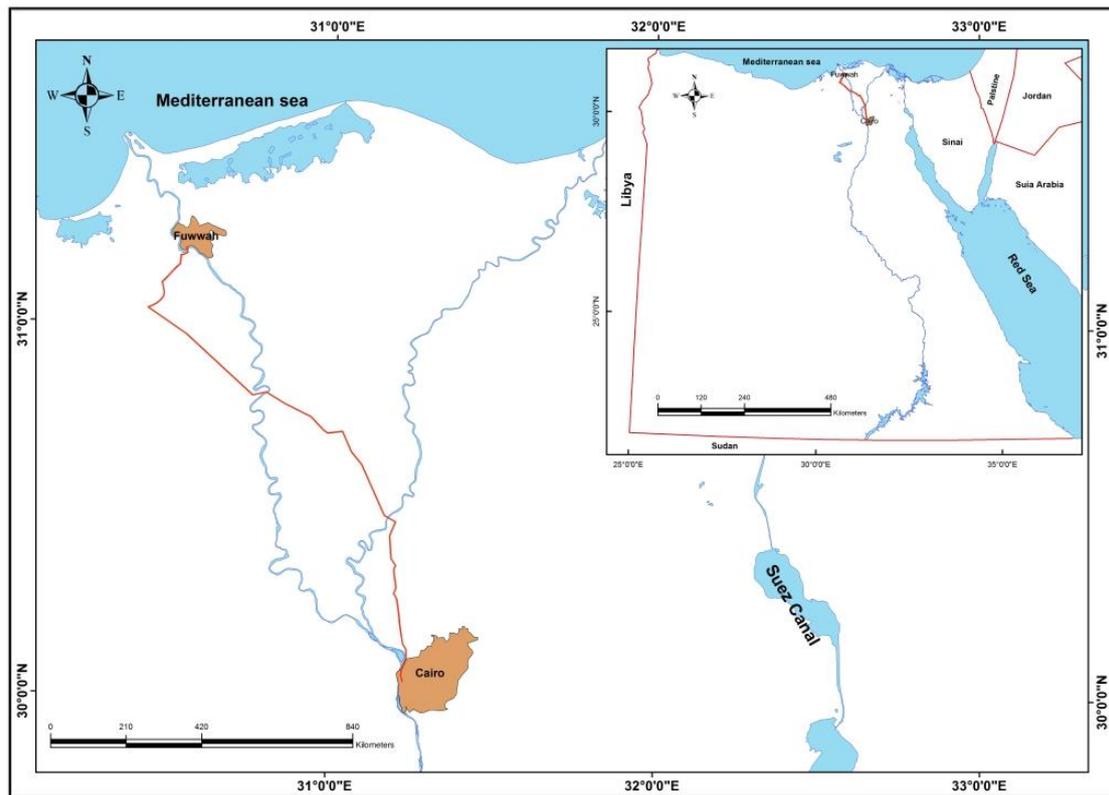


Figure 5 the location of the newly located centre of papermaking in Egypt in the city of 'Fuwwah'

Consequently, it can be suggested that Cairo was not the only centre of papermaking and the paper trade in Egypt. There were probably other centres, one of which was the city of Fuwwah. Additionally, it can be expected that there were paper mills along the Rosetta branch of the Nile in the city of Fuwwah, and probably other cities that had the same geographical properties and which benefitted from the running water needed to produce the power for milling fibres. Moreover, al-Fuwwi paper was probably the paper that the Persian poet, scholar and traveller Nasir Khusraw (1004-1088 AD / 395-480 AH) described during his visit to Egypt in 1047 AD / 438 AH. This was approximately three centuries before the time of al-Qalqashandi (1356–1418 AD / 756-820 AH) and Khusraw was amazed that the merchants of Cairo used paper to wrap goods for customers (Khusraw 1993, p.120).

¹ Ibn Sa'id al-Andalusi, *al-Nuḡūm al-Zahira Fī Ḥadrāt Ḥulyi al-Qahira*, p.29, and Ahmed al-Maqrizi, *al-Mawa'iz wa'l-i'tibar fī Dīkr al-Ḥiṭaṭ wa'l-āṭār*, 367.

European Paper

This paper is known in historical Arabic sources as '*Wārāq al-Firnġāh*', meaning paper produced in Europe. al-Qalqashandi also described the European paper in his text, ranking it fourth and last in order after Baghdad, Syrian and Egyptian paper according to quality and size, as follows¹:

“..., and less than that [the Egyptian paper], the paper of the people of the West and the Franks which is very poor [in quality], fast to decay, and less durable; therefore they [the people of the West and the Franks] write *al-Maṣaḥif* [the Quran books, meaning their holy books or bibles] in parchment as in the past hoping for long durability”

The text shows that al-Qalqashandi ranked the European paper at the bottom of his list according to his criteria for the assessment of paper quality. This paper had poor quality, rapid degradability over time.

The European paper that existed in the Egyptian paper market at the beginning of the 15th century AD/9th century AH was manufactured in Italy, and in the towns of Fabriano and Treviso in particular, where the industry was established in the late 13th century AD/7th century AH². Paper was shipped from Italy to the agents of Italian paper traders in Alexandria; however, the poor quality of the product made it cheaper compared to the other types of paper on the market. It has been suggested that its use was limited to writing notes, letters and bills, rather than making books and manuscripts³. However, over the following centuries, the industry in Europe became more well-developed, and most of the paper sold in Egyptian markets during the 17th and 18th centuries AD/11th and 12th centuries AH was made in Europe⁴.

Conclusion

In this research, the types and characteristics of mediaeval papers available on the Egyptian market during the 14th to 15th centuries AD/8th to 9th centuries AH have been discussed. Three types of Islamic paper with various brands and classes, and one type of European paper were found on the paper market during the period considered. Those types were classified by al-Qalqashandi (1356–1418 AD/756-820 AH), a contemporary scribe, based on their size and quality which includes whiteness, thickness, the symmetry of dimensions, and durability over time.

Of these types, Baghdad paper was ranked highest based on both size and quality. The Syrian paper came next; and two types of this paper could be found in Egypt, Hama paper, and Damascus paper. The latter type had two brands, Damascene paper and bird paper. Hama paper, based on both size and quality, was the best Syrian paper at that time and was larger and better than the Damascene paper which was nevertheless famous as a symbol of significance and quality in previous centuries and since the 10th century AD/4th century AH was known in Europe as '*Charta Damascena*'. The second brand of Damascus paper, bird paper, was small at about seven centimetres in width, very fine and thin, and used for the writing of very small books and messages carried by pigeons.

¹ Ahmed al-Qalqashandi, *Ṣubḥ al-A 'šā fi Ṣena't al-Inšā*, Vol. 2, 476-7.

² Jonathan Bloom, *Paper Before Print: the History and Impact of Paper in the Islamic World*, p. 84 & Leila Avrin, *Scribes, Script, and Books: The Book Arts from Antiquity to the Renaissance* (Chicago: American Library Association, 2010), 288.

³ Jonathan Bloom, *Paper before Print: the History and Impact of Paper in the Islamic World*, 84.

⁴ Don Baker, "Arab Papermaking", *Paper Conservator* 15 (1991): 28-25

Egyptian paper was ranked the third in order after Baghdad and Syrian paper. At that time, this paper had two main brands distinguished according to size, quality and sizing: *al-Manṣuri* paper and normal paper. *al-Manṣuri* paper was the best brand of Egyptian paper on the market, characterized as large and normally sized and burnished on one side. The second-best brand of Egyptian paper was known as ‘Normal paper’ which was available in four different classes arranged according to their quality as follows. The best class of normal paper was *al-Maṣlūh* (prepared) and it is characterized as sized and burnished on both sides. The second class was known as *High*, the third as *Medium*, and the other as *al-Fūwwi*.

Finally, al-Qalqashandi ranked European paper at the bottom of his list, fourth in order of quality after Baghdad, Syrian and Egyptian paper according to his criteria of assessment. This paper was of poor quality and was rapid degradable and less durable.

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